

Editorial Designing Modern Life

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The argument of this **docomomo** Journal stands for interior design identified as a key conservation issue for modern living.

docomomo acknowledges the major relevance of reflecting on the Modern Movement heritage, focusing on one of the most fragile conservation issues: modern interior space namely on modern furniture and product design questions.

The aim is to contribute for the discussion that relates modern heritage and interior space, common daily life and *musealization* of Modern Interior Spaces, gathered underneath a global strategy, to better understand and preserve these delicate monuments. In fact, the interior space with all devices and furniture pieces is frequently not appreciated as an essential matter in safeguard interventions. That's why 2012 **docomomo** Journals are devoted to interior design and furniture, discussing preservation strategies and critical reflexions.

Ranging from restoration process research and know-how, new modern materials and techniques are discussed facing up to new conservation process and innovative rehabilitation solutions, as well. One knows that Modern spatiality must require furniture conceived under a unitary design concept, which implies today to identify every detail with the aim of a reconstruction process, where research on documentation is one of the success keys.

This year of 2012, when **docomomo** major Conference is hosted at the Espoo Cultural Center, the stimulus of this *city center* settlement in connection to Otaniemi University Campus is the starting point that justifies going deeper in the relation that connects form and function, esthetics and ethics. In fact, as Gropius stated, the "design from the cup of coffee to the urban plan" ability is the motto challenge for the 12th **docomomo** International Conference simultaneously with Helsinki being the World Design Capital 2012 dealing with all disciplinary aspects.

Finally, this issue wishes to pay tribute to the Finnish culture and its original contribution to Design. Indeed, through the conception of organic forms and the use of natural materials, a different path has been explored answering to sensorial and tactile comfort. Following the global design idea, this theme is the result of a challenge which is related to the Finnish approach to Modern Movement architecture, namely to an organic character that privileges comfort and economy, beauty and utility, simplicity and synthesis; improving regional roots in order to fulfill the sense of the place.

I wish to thank Bárbara Coutinho who acted as guest editor of this "Designing Modern Life" Dossier. Due to her knowledge and know-how acquired within a transversal framework as an art historian, researcher, curator and MUDE director, together with the knowledge shared by a range of authors, in connection with pioneer practical investigation on the subject carried out by restorers and researchers, it is possible to extend this debate over the reflection on the creation itself, the tools created by Modern Movement architects and designers to answer to efficiency and economy, improving comfort and beauty in daily life.

Ana Tostões, Chair of **docomomo** International



1. Espoo Cultural Centre
Arto Sipinen
1989



2. Weilin&Göös Printing Plant – WeeGee
Aarno Ruusuvuori
1964-1974



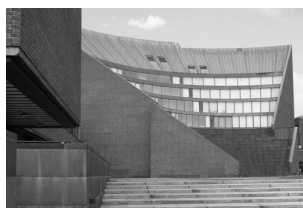
3. Tapiola School
Jorma Järvi
1959-1960



4. Tapiola Baths
Aarne Ervi
1965



5. Kontionkenttä Park
Jusi Jännes
1959-1961



6. Technical University
Alvar Aalto
1964



7. Dipoli Kongressikeskus
Reima & Raili Pietilä
1961-1966



8. Otaniemi Chapel
Heikki & Kaija Siren
1957



9. Housing Buildings
Alvar Aalto
1962-1967



10. Studio in Munkkiniemi
Alvar Aalto
1956



11. Töölö Rowing Stadium
Hilding Ekelund & Alpo Lippa
1940



12. Olympic Stadium
Yrjö Lindegren & Toivo Jäntti
1940-1952



13. House of Culture
Alvar Aalto
1955-1958



14. City Theatre
Timo Penttilä
1959-67



15. Finlandia Hall
Alvar Aalto
1967-1971



16. Temppeliaukio Church
Timo & Tuomo Suomalainen
1969



17. Portania
Aarne Ervi
1957



18. Rautatalo
Alvar Aalto
1951-55



19. Academic Bookshop
Alvar Aalto
1962



National Pensions Institute
Alvar Aalto
1952



Pääkaupunkiseutu

Helsinki Metropolitan Area

Helsinki

Espoo

Otaniemi

Tapiola

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Why Preserve Modern Now?¹

By Bárbara Coutinho

Coming to design in a natural development from architectural practice, Le Corbusier considered design not as a sum or addition to architecture. Its existence decisively constructed and modulated interior space, as light and shadows, materials or planes. From that belief, he quests the perfect and ideal form that asserts itself as a model of universal validity, arriving at three different furniture types: type-needs, type-furniture and human-limb objects². Consequently, together with Charlotte Perriand and Pierre Jeanneret, in 1928 he drew the prototype of the Grand Confort armchair, presented the following year at the *Salon d'Automne* in Paris. In the photomontage published in *L'Architecture Vivante* (Spring, 1930),³ the armchair is in a foremost position, occupying the foreground, isolated in a no gravity and transparent space, where Charlotte Perriand reclines on the famous LC4 chaise longue [figure 4]. Grand Confort is the mirror of a decade that takes the chair as a space of experimentation and the tubular steel as the main material of research. Icon of the *Esprit Nouveau*, its also conveys a new conception of space, time and object, revealing the rationalist aesthetic that characterized the first decades of the 20th century. Eighty years later, like many other examples of Modern design, its copies and reproductions get multiplied, although since 1964 Italian Cassina has the exclusive worldwide rights to manufacture it, being nowadays the only company authorized by Fondation Le Corbusier.

As from 1980, the heirs of the *Anti-Design* and *Radical Design* movements further questioned the Modern definition of design and its heritage, proclaiming the death of functionalism and debating the object itself, its utility, aestheticization, cultural heritage, image and value, relation with economy system and language. This criticism is evident, for instance, in Mies Lounge Chair of the

Archizoom Associati. With similar radicalism, almost ten years later, in 1978, Alessandro Mendini camouflaged Marcel Breuer's Wassily chair and introduced a religious touch to Gerrit Rietveld's Zig-zag chair, both symbols of Modern ideology that were reedited at the time. More recently, there are several interpretations of Modern chairs. Particularly from Le Corbusier's Grand Confort we can find three examples of three authors: "Grand Confort/Comfort Sans, the Corbu Dommage" (1980) by Stefan Zwicky; "Le Corbusier Chair" (1994) by Jorge Pardo; and "Naked Confort-Corrupted Classics Collection" (2003-2004) by John Angelo Benson [figures 1, 2, 3].

On the border between art and design, Benson upholds the tubular chrome steel structure and the original cubic shape, replacing leather components with an unusual material, straw. With humour, Benson seems to undermine the architectural thinking of Le Corbusier, but paradoxically when he undresses the chair he emphasizes its skeleton and structure in a de-construction process that leads us to the rethinking of the main Modern principles. Although it may be seen as an iconoclast gesture, Naked Confort highlights the value of the original piece by reinterpreting it. In his "Corrupted Classics Collection" Benson also works with the Red-Blue chair by Gerrit Rietveld and the Barcelona chair by Mies van der Rohe and Lilly Reich to create "Red and Blue, but clear" and "Mies Lobby Trap". The choice is categorically incisive because he picks from our collective memory three classics of Modern design which are universally recognized. Or we know the original works or we will not be able to interpret Benson's pieces. With that he makes us more aware of the timeliness of these icons, especially when our material culture has transformed them into appealing images widely reproduced and consumed, with a series of copies, reproductions and re-editions distancing themselves from the Modern original. Ultimately, the result is a reflection on our own memory of the Modern, its significance for society, heritage and cultural importance.

Moreover, we are going through a profound transformation in our global society, standing by a new economic paradigm, growing technological complexity and renewed social demands. Cities are changing, and so are we. The way we live, work and inhabit, but also learn, communicate, and move, shifted in the last years. The increasing use of new technologies or new materials have expanded the possibilities of production and conservation, while at the same time they have also provoked profound changes in design philosophy and methodology. In a wide range of disciplines, the research that has been carried out into the physical behaviour of materials has led to major reinventions in each field, allowing more complex, organic or aerodynamic solutions. When the

borders between design, art and crafts are broken down, younger generations seek for alternative manufacturing processes, return to traditional handcraft techniques and investigate on new forms of recycling. Countless projects show a more widely ethical consciousness and a social responsibility. The aim is to develop products, systems and services with a longer life cycle.

In this context, studying, understanding, preserving and reinterpreting Modern heritage gains a wider importance. To preserve Modern architecture, interior designs and furnishings means necessarily to rehabilitate or reuse, turning them effectively alive. But it also implies to raise public awareness of the cultural value of this heritage and to make a profound study of the ideology and context that gave rise to them. Therefore, we need to reflect on its contemporaneity and the way it can contribute to a

more sustainable and responsible development. To preserve Modern heritage is a highly relevant theme due to its significance in our times but also due to a number of conceptual and technical challenges. It's important to discuss the method and extension of each intervention, the material, formal or ideological authenticity regarding the original program, durability, and foresee future needs. But it is also important to value the level of interference, the basis from which it is made and the consequences of new performances or functions. Therefore, it demands a multi-faceted approach. As a result, the articles gathered in this Journal aim to address the multiple ways in which Modernism has been claimed and to present different and complementary perspectives of preservation, highlighting recent examples and successful case studies.

Emphasizing the holistic character of the Modern



Figure 1. **John Angelo Benson**. Naked Confort (2003). Hay, Petit Confort (LC2) frame produced by Cassina. 67h x 76w x 70d cm

Movement and its goal to design Modern life in a *gesamkunstwerk* spirit with housing as the central theme of study and innovation, two essays explore the recently restored Tugendhat House by Mies van der Rohe and another article analyzes the coherence and unity of Charles and Ray Eames' work and thought. **Monika Wagner** shows how the Tugendhat House is a perfect metaphor of Mies' purist classicism, architectural space and living concept, explaining how materials, surfaces, furniture, light and nature decisively contribute in lightness, unity and tactility. **Miroslav Ambroz** emphasizes how Tugendhat is an expression of *gesamkunstwerk* with every detail (textiles, upholstery, covering material, colors) subordinated to the whole. Further on, he focuses on the reconstruction process to describe the importance of an initial research and documentation for the subsequent production of authentic replica furniture that respect the original pieces. Regarding Charles and Ray Eames, **Kyle Normadin** addresses the way they articulate the principles of Modernism with wartime technology to design a Modern living in a post-war era. The article also underlines the importance of Case Study House nº 8 as a mirror of a global living space and the house conservation project for a better understanding of their work and significance.

Looking at the legacy of ethics and Modern philosophy, **Klaus Klemp** concentrates on the "Ten design principles" of Dieter Rams and on his reflection about good design, specially his ideas of simplicity, innovation, technology, economy, intelligibility and utility. The result is the reinforcement of Dieter Rams' importance for the praxis and ethics of nowadays design.

Although the history of the Modern movement continues to stress it as a result of western culture, spread afterwards from Europe to the rest of the world, we talk more and more of peripheral Modernities.⁴ **Louise Noelle** speaks about furniture and interior designer Clara Porset, putting in evidence the way she linked Modernity with local Mexican tradition and crafts in her interior designs. On the other hand, **Marc Dubois** focuses on Belgian architect Gaston Eysselinck, mainly in his masterpiece, the Post Office building in Ostend, stressing the reasons why this building continues to be incorrectly forgotten.

Jurjen Creman and **Otakar Mácêl** focus more directly on Modern furniture and its relation with Modern architecture. While Creman presents the restoration process of the Zig-zag chair by Gerrit Rietveld to explain how the new materials and new techniques used by Modern architects requires today new conservation solutions, Mácêl concentrates on the complementarity between design and architecture. He focuses on the steel tube furniture and the cantilever chairs and highlights their real contribution to the successful creation of Modern spatiali-

ty, specially its geometric, lightness and abstract character.

This Journal especially emphasizes the role of Finnish Modern design through the figure of Alvar Aalto and the way he represents a different path in the Modern movement, more organic, preferring to bend wood and seeking cosy and comfortable environments with as much natural light as possible. **Pekka Korvenmaa** writes an article about the architect's Modernity, thought and attitude, while **Mia Hipeli** focuses on the importance of Artek, created in 1935. The author bears witness of the importance of the company in the production, distribution and marketing of Aalto's pieces, and also of the worldwide promotion of Scandinavian design, spreading its simplicity, elegance, comfort, warmth and humanism. **Cristian Suau** puts the emphasis in the ephemeral architecture of exposition pavilions, discussing the significance of rebuilt this spaces and explaining in detail the philosophy and materiality of Aalto's *Metsapaviljonski*.

Notes

1. The title was inspired by *Why Design Now? - National Design Triennial of 2010 in Cooper-Hewitt, National Design Museum* where the main question was to know how design could help solving the problems of our society.
2. Le Corbusier, *L'Art décoratif d'aujourd'hui*, Collection de L'Esprit Nouveau, Paris, Les Éditions Arthaud, 1925.
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Bárbara Coutinho

Born in Lisbon in 1971, she is the Director of MUDE - Design and Fashion Museum, Francisco Capelo's Collection since 2006. Member of Francisco Capelo's Collection Management Board. Invited Assistant Professor in *Instituto Superior Técnico* and collaborator in the Curatorial Studies Master in Lisbon University. Master in Contemporary Art History with the thesis *Carlos Ramos. Architecture, thinking and action: the search for bringing together Tradition and Modernity*. At present she is developing a PhD on the phenomenology of the contemporary exhibition space. Curator of MUDE Permanent Exhibition, "Seeds, Capital Value" (2010), "It's forbidden to forbid!" (2009) or "7 Environments/7 Designers" (2002). Author of "Sena da Silva, Designer" (2009) and "Unique and Multiple" (2011), signing essays and articles on contemporary creation, design, architecture and museology. Has also participated in conferences, juries and seminars. Between 1998 and 2006, was curator of the program of lectures about contemporary art/design/architecture and coordinator of the educational department of *Centro Cultural de Belém*.

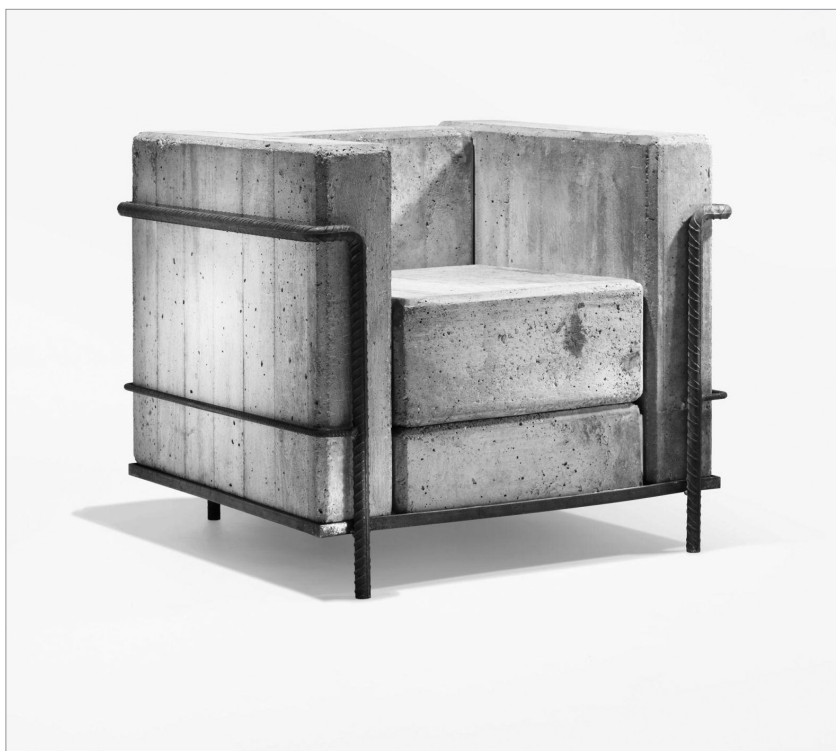
Figure 2. Le Corbusier Chair, 1994,
by Jorge Pardo

Figure 3. "Grand Confort/Comfort Sans, the
Corbu Dommage", 1980, by Stefan Zwicky.

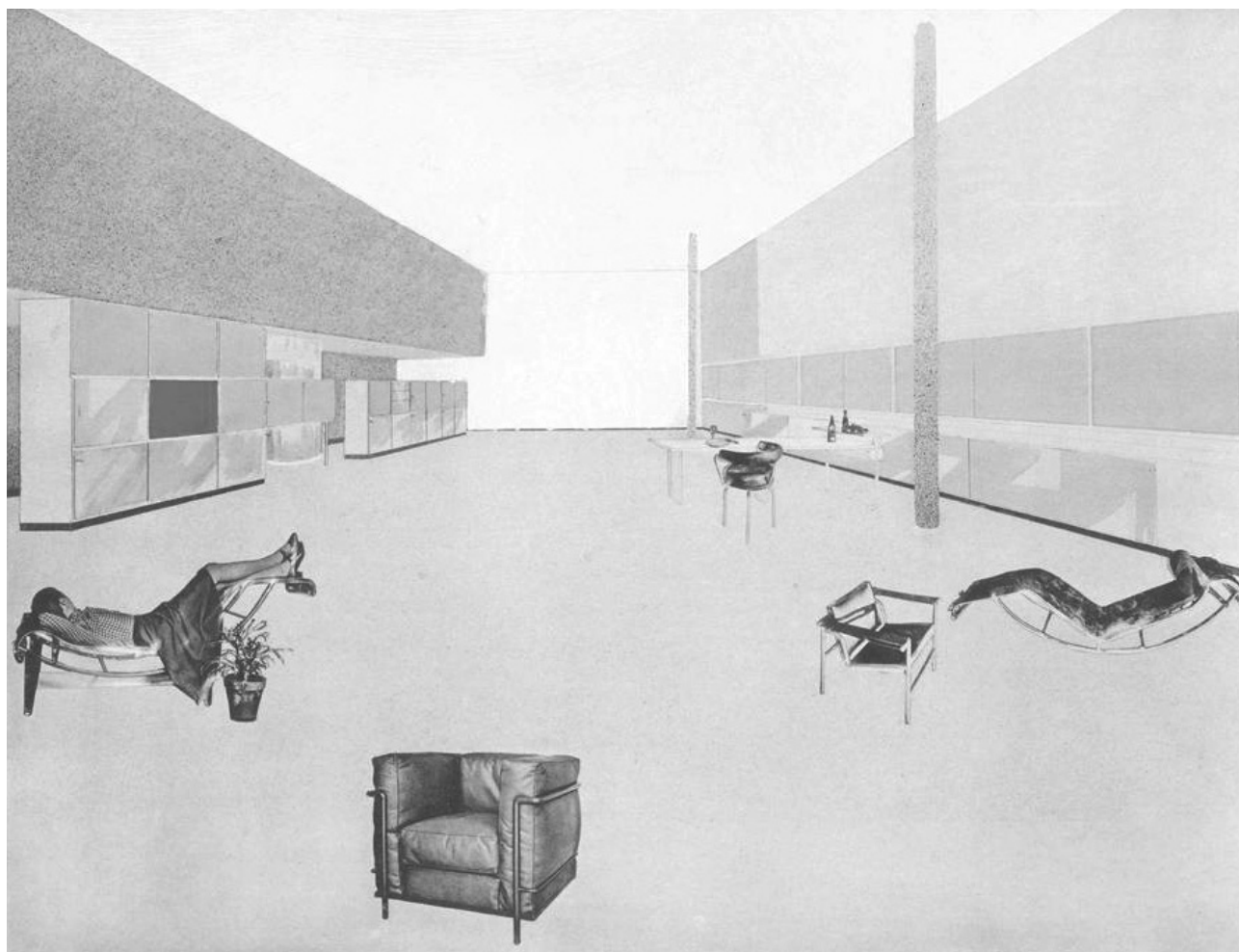
Figure 4. Photomontage of the prototype of
the Grand Confort armchair, presented at the
Salon d'Automne in Paris, published in
L'Architecture Vivante (1930).
© Fondation Le Corbusier.



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Visions on Furniture



The growing interest in Modern furniture, which by now can also be of a respectable age, has lent a new dimension to the profession of furniture conservation. New materials and techniques demand new conservation solutions.

By Jurjen Creman

Training

During training as a furniture conservator, the emphasis is often on historical cabinet-making techniques, materials and furniture styles. Students learn a lot about traditional joints, veneer and marquetry techniques, carving, wood species and the many kinds of clear and painted wood finishing.

The profession of furniture conservator lies between craft and science. On the one hand, there are the restorations based on historical cabinet-making techniques, while on the other, there is conservation science with its new materials and techniques. Material-technical research also forms part of the furniture conservator's area of expertise.

20th Century Furniture

Furniture from the 20th century differs in two respects to furniture from preceding centuries made using traditional methods.

First of all, there is often a lot more information available about these pieces of furniture than about their predecessors. The makers and designers are known and are sometimes still alive. There are many documents including specifications and drawings containing information about materials and techniques. A great deal of attention has been devoted to Modern furniture and its manufacture in contemporary trade journals. Furniture manufacturers had catalogues made with a lot of material-technical information and there are many photos, in both black and white and colour that can provide the conservator with information about the history and original appearance of the furniture.

The other point on which they differ is the materials and techniques that were used. The 19th century saw big changes in the furniture industry. The machine made its entry leading to changes in furniture construction and joints. Mortise and tenon joints were machine-made and dowels began to be widely used. New materials were created like plywood, blockboard and chipwood. The hide

and bone glue used from time immemorial was replaced by modern synthetic glues developed by the chemical industry, which also fostered the development of many new stains and varnishes. In addition to the machine-made furniture produced by factories, furniture also continued to be made using traditional methods in the 20th century.

Zig-zag Chair

A Zig-zag chair designed by Rietveld in 1932 for the Amsterdam interior design firm, Metz & Co, was restored by my workshop a few years ago. It was made of chromium plated tubular steel with a seat and back made of woven cord. The chair was probably a limited edition, since there are only a few known specimens. Four chairs can be seen in a 1933 photo during the furniture presentation "Op het Dak" (On the Roof) in the cupola of Metz & Co. [figure 1].

The *Centraal Museum* in Utrecht purchased this chair. The back was still in place in a worn and very dirty condition, but the seat was missing completely. The chrome was extremely damaged and partially missing. The tubular steel was badly oxidized.

Because of the original condition, it was decided to restore the chair with minimal intervention. The frame consists of two parts, which are joined at seat height. The frame was dismantled at this point enabling us to push the damaged back carefully away from the frame. A textile conservator washed the woven back and bleached unsightly brown stains as well as possible. The cord around the tubes was badly affected by the rusty steel. An almost invisible protective and strengthening layer of tulle was applied. Loose and broken pieces of cord were fixed to the support layer of tulle. Missing pieces of cord were woven in with new material, so that the back looked complete again. The traces of wear remained visible. The new seat was woven with cord matching the original. The photo from 1933 was able to provide a definitive answer about the number of threads to be used.

After consultation with a metal conservator, the tubular frame was cleaned and the rust was removed. It was inevitable that many small flakes of chrome were lost in the process. Several large flakes of chrome were fixed in place with synthetic glue. The frame was polished after the rust had been removed, bringing back the shine of the

< Figure 2. Zig-zag chair after treatment.
Collection Centraal Museum Utrecht. Photo by Jurjen Creman.



Figure 1. Metz cupola with table and zigzag chairs.
Photo from Rietveld Schröderarchief/Centraal Museum, Utrecht inv.nr. 192 F 008. Image & copyrights CMU/ Pictoright, Amsterdam.

remaining chrome. It was also treated with microcrystalline wax to prevent the steel from oxidizing and to preserve the shine.

The chair's original material in this restoration was preserved as much as possible. The end result is a chair with obvious traces of wear that gives us an idea of what it once looked like. There is harmony between the badly corroded chrome of the frame and the discoloured seat and back. With this minimal intervention treatment, the chair has lost its functional purpose but gained in expression. The functional aspect is of less importance to museums. They value originality in material and construction.

This chair is now missing the crisp, clear design it had directly after manufacturing. Only a replica can show the novelty of the design in pristine condition. The restored chair can serve as an example for a replica and can be kept in its present condition [figure 2].

Paintwork

My workshop has a lot of experience with furniture designed by Gerrit Rietveld, mostly painted furniture from the Interwar period. The underlying principle with all of our restorations is maximum conservation of the original materials with minimal intervention. A lot of the restored furniture comes from collections and will no longer be used in the future. This means that the treatment can be particularly conservational.

Paint analysis is often carried out prior to the restoration. Paint samples are taken from several places from each piece of furniture. By using UV light on cross-sections of these paint samples, we can determine what the first coat of paint looked like. We can also determine by

means of various analysis techniques, which pigments and binders these first coats of paint consisted of [figures 3, 4].

Since painted furniture is subject to wear, it was often repainted a number of times. The coats of paint that were applied later differed from the original coats in colour, texture and gloss.

Material-technical and archival research shows that the original coats of paint were applied in a particular way and with a specific purpose. Rietveld often applied the paint directly to the wood. As a result, the texture of the wood remained visible through the coat of paint. Parts of a piece of furniture were also stained and varnished or waxed. He used these techniques deliberately to accentuate the wood. Many of Rietveld's drawings mention using these specific surface treatments [figures 5, 6].

When furniture is repainted, the effect of the first coat disappears. If a decision is made during a restoration to go back to the original finishing phase, this can only be achieved by removing the overpaintings and exposing the original surface. Applying a historically sound new coat over the overpaintings will never approach the effect of the first coat applied directly to the wood. Stripping a piece of furniture and applying a new finishing coat is not an option either, because the original material disappears as well.

Unlike buildings, furniture hardly ever appears to have been stripped before it was painted over. In many cases, they have scarcely been sanded or degreased. This means that removing overpaintings can sometimes turn out surprisingly well. The exposed original finishing coats give us a good idea of what the furniture once looked like, even when these finishing coats are badly damaged. Removing overpaintings, however, is a very difficult and time-consuming treatment.

Future

There are unfortunately very few examples of old furniture remaining that are still in their original condition. They have often been restored or have undergone structural changes. Original finishing coats and upholstery are a rarity. We do, however, regularly come across examples of 20th century furniture in completely original condition. These are unusual pieces that together with their documentation form an exceptional ensemble.

The challenge for the furniture conservator in this case is to perform the work in such a way that valuable information does not get lost, but, instead remains accessible to future generations. Sound knowledge of new materials and techniques is indispensable in these cases. This means that even more research will have to be done to be able to identify materials.

Buildings and interiors are often designed together

with the furniture. Since furniture suffers less than buildings, we can sometimes find materials and finishing coats on the furniture that have long disappeared from the building. The restoration of buildings should therefore go hand in hand with the restoration of interiors and furniture. And yet we often see a difference in how the work is done. Good cooperation between the conservators involved is essential for a well-balanced final result.

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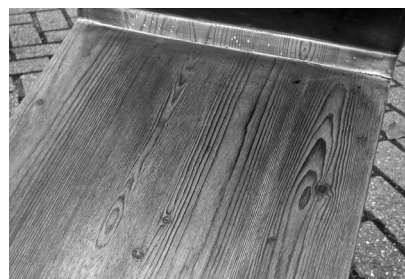
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Jurjen Creman

Born in 1964, he is a furniture restorer/conservator who specializes in the restoration, conservation and study of 20th century furniture. He was involved in the retrospective of Gerrit Rietveld's work in 1992-93 and in the restoration of Huis Sonneveld, a Modern house in Rotterdam. He has been researching and restoring Modern furniture and interiors in his own workshop since 1997, with special attention being paid to their material and structural properties. Jurjen's speciality is furniture made by Gerrit Rietveld.

Figure 3. Back of high chair. Collection Centraal Museum Utrecht and Stedelijk Museum Amsterdam.

Figure 4. Detail of back with original ultramarine blue paint and partly (dark blue) overpainted. Collection Centraal Museum Utrecht and Stedelijk Museum Amsterdam.

Figure 5. Zigzag piano stool. Private collection, The Netherlands.

Figure 6. Detail of zigzag piano stool with brushed wood grain and whitewash. Private collection, The Netherlands.

Photos by Jurjen Creman.

Modern Architecture and Modern Furniture



Modern architecture and Modern furniture originated almost during the same period of time. Modern architects needed furniture compatible with their architecture and because it was not available on the market, architects had to design it themselves. This does not only apply for the period between 1920 and 1940, as other ambitious architectures had tried before to present their buildings as a unit both on the inside and on the outside. For example one can think of projects by Berlage, Gaudí, Mackintosh or Horta or the architectures of Czech Cubism and the Amsterdam School. This phenomenon originated in the 19th century and the furniture designs were usually developed for the architect's own building designs and later offered to the broader consumer market, sometimes through specialized companies. This is the reason for which an agreement between the architect and the commissioner was needed, something which was not always taken for granted.

By Otakar Mácêl

The museum of Czech Cubism has its headquarters in the Villa Bauer in Libořice, a building designed by the leading Cubist architect Jiří Gočár between 1912 and 1914. In this period Gočár also designed Cubist furniture. Currently the museum exhibits the furniture from this period, which is not actually from the Villa Bauer house itself. This is because the commissioner of the original building thought that it was already special enough and once it was completed he fired the architect and decorated the house himself.¹

Gerrit Rietveld did not have to deal with this kind of problems in Utrecht during the furnishing of the *Schröderhuis* [figure 1]. Rietveld worked on the design and the furnishing of the house close together with the wife of the commissioner. The *Schröderhuis* is a reference key point of *De Stijl* together with the Red-Blue chair that is part of the interior [figure 2]. The house and chair constitute a unity, the spatial construction consisting of colored patterns, lines and geometric shapes. It seems like Rietveld tried to create a unity by matching the furniture with the house.

In practice this did not work out because the chair was designed in 1919 and the original one did not have color²—color appeared between 1922 and 1923.³ Although the chair was part of the interior, the chair can also appear on the balcony as seen in pictures taken between 1920 and 1930.⁴ The reason is that Ms. Schröder was not always enchanted by Rietveld's creations. Which is then the relation between the house and the chair? In 1963, Rietveld said "When I had the opportunity to create a house with the same intentions I had realized in that chair, I immediately jumped at it".⁵ The chair was not primarily

designed to fit in the interior, but a previous epitome of *De Stijl* principles that culminated in the *Schröderhuis*.

The chair was there before the architecture, which was not so surprising because Rietveld was an interior designer. The same can be said about the "father" of Modern functional design, Marcel Breuer. With the influence of Rietveld he designed Modern wooden chairs during his studies in 1922 in Weimar—chairs which were not designed for a specific building. He was not an architect but an interior designer and he became the head of the furniture workshop of the Bauhaus. Between 1927 and 1933 he designed Modern interiors and his first house, Harnischmacher in Wiesbaden, was realized in 1932. His name is mostly linked with the functional interior icon, the tubular steel furniture. In 1925 he designed his first steel furniture; a *fauteuil* called the Wassily chair⁶ and a stool. Both pieces were developed in the educational workshop of the airplane factory Junckers because at the Bauhaus workshop they only worked with wood. The chairs were initially placed in the Bauhaus in Dessau designed by Walter Gropius [figures 3, 4]. Still the question arises; was the furniture specially designed for the building? The *fauteuil* was probably not but it is not clear with the stools which were situated in the auditorium. In the end Breuer founded his own company, Standard Möbel, in Berlin between 1926 and 1927, because he did not want his steel furniture to be linked with the Bauhaus.

Although the *fauteuil* is nowadays the symbol of functional design, it was the stool which stood for a new era. The Wassily chair is in fact a translation of the Rietveld Red-Blue chair in steel tubes. The stool on the other hand is not so spectacular; it embodies the use of the industrial materials, the bendable steel makes a continuous tube line possible, which can lead to a closed yet a transparent shape.⁷ All the following designs made by Marcel Breuer were designed on this principle.⁸

< Gerrit Rietveld with a model of the "core house".



Figure 1. The Schröderhuis by **Gerrit Rietveld**, Utrecht, 1924. Photo by Hay Kranen.



Rietveld Schröder House, **Gerrit Th. Rietveld**, 1924
The Rietveld Schröder House is part of the Centraal Museum, Utrecht.
Image & copyrights: Centraal Museum, Utrecht. c/o Pictoright 2012.
www.centraalmuseum.nl

Rietveld and Breuer are an exception because most designers made furniture initially for their projects. This was also the case with the model houses at the *Weißenhofsiedlung* built for the *Werkbund* exhibition *Die Wohnung* in Stuttgart in 1927. These model houses were not only an exhibition of the new architecture but also showed how it was possible to live in such an architecture: the new living.⁹ A few houses showed a clean, almost empty interior with a lot of light and space, where the transparent steel furniture with shiny tubes fit perfectly with the houses.¹⁰ For this opportunity Mart Stam, Mies van der Rohe and J.J.P. Oud specially designed their houses with this new steel furniture. Stam and Mies showed the novelty with their cantilevered chairs. Others, like Walter Gropius used the Breuer furniture, and Le Corbusier and Mart Stam used the Thonet wooden chairs. Some interiors were furnished by others; Mies van der Rohe's houses were furnished by Arthur Korn, Heinz and Bodo Rasch, and Max Ernst Haefeli.

The houses were not always furnished just with tubular steel furniture. Besides the already mentioned Thonet chairs, the Rasch brothers also used their wood designs



Figure 2. The Red-Blue chair by **Gerrit Rietveld**, 1918–1923.

such as the cantilevered *Sitzgeiststuhl* chair and Haefeli presented a cast chair, the *Elektron*.

But the Modern architecture of the 20s and 30s was mostly associated with steel tube furniture. The predilection of avant-garde architecture for this type of furniture appears from the fact that 11 of the 23 participants at the first CIAM Congress at the Château de La Sarraz in 1928 designed steel tube furniture.¹¹ Even art historian Siegfried Giedion used these designs. The continuation of the *Weißenhofsiedlung* idea in Brno (1932), Breslau (1929), Stockholm (1930), Berlin (1931) and Vienna (1932) also showed steel furniture. Modern architecture and Modern interior went hand in hand. From the 20s until the beginning of the war many Modern houses were designed according to the architect's taste¹² or by the Modern furniture that was rising in the market. Not only were the white villas furnished like this but also the social housing was furnished with Modern furniture. For example, the wooden furniture of Ferdinand Kramer and the *Frankfurter Küche* (Frankfurt kitchen) by Margarete Schütte-Lihotzky. While the avant-garde furniture was losing its exclusivity in the 30s, wooden and reed furniture was started to become very popular. The laminated wood furniture (Aalto, Breuer) was a new alternative to the tubular furniture.

What was it that the architects saw in this type of furniture? Which was the common ground between Modern architecture and Modern furniture? Initially it was the spaciousness and sober, yet elegant machinelike look, which

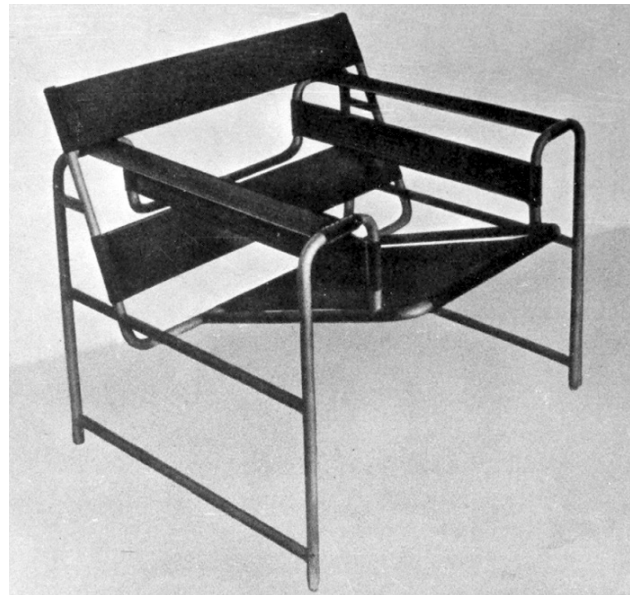


Figure 3. The Wassily chair by **Marcel Breuer**, 1925–1926.



Figure 4. The Bauhaus refectory with the stools by **Marcel Breuer**.

was missing in the last furniture designs. One saw this furniture as an anonymous, industrial series of practical, hygienic and light products which at the same time were inexpensive. Actually they had the same characteristics as Modern architecture. The spaciousness and transparency was also present in the tubular furniture and the curved beech wood chairs. Not only because the chairs had a simple shape but also because of the fact that the furniture was not coated—the Red-Blue chair and the Wassily *fauteuil* can be seen as a skeleton of an English club non-coated *fauteuil*. In Modern interiors, furniture was not allowed to become a visual and physical obstacle in the space. Known are the lyrical words by Breuer about the spacious effect of the tubular furniture, as “airly pierced, drawn, as it were in the space”.¹³ The Barcelona Pavilion and the Tugendhat house of Mies van der Rohe

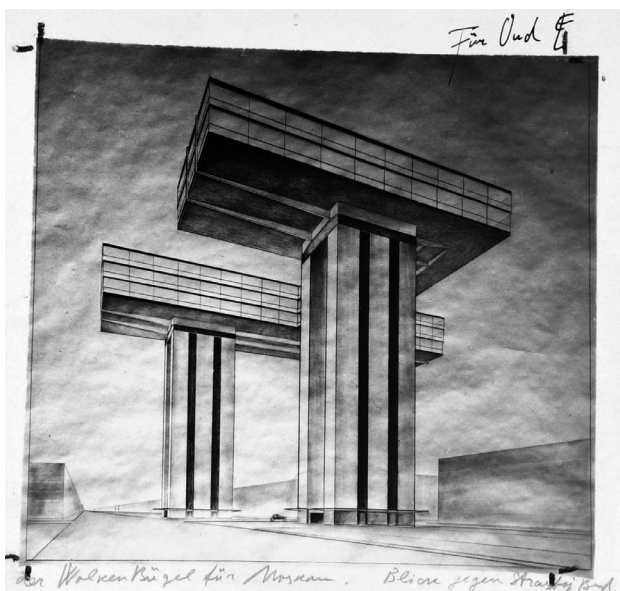


Figure 5. El Lissitzky's *Volkenbügel* (iron clouds), 1923-1925.

were an example of Breuer's interior designs. The industrial origin of the steel and beech wood furniture had more meanings. The industry, back then a symbol of progress, became the basis of industrial building and mass production of practical and cheap objects. The materials for this type of furniture; the steel tubes and the bended beech wood, were also industrial standardized products.

Through the laws of the automated machine selection, a new and practical shape without unnecessary decorations was to be provided for an anonymous serialized product. Le Corbusier's theory about good form, object-type, highlights this point.¹⁴ The importance of the machine metaphor is shown in Breuer's description of his first *fauteuil* as "*meist maschinenmässig*" (the most machine-wise).¹⁵ Real "sitting machines" were only developed by Prouvé. The term hygiene was a twofold both in architecture and in Modern furniture. On the one hand it concerned the physical hygiene: the architecture of light and air, together with the furniture made it easier to clean. On the other hand hygiene strictly had to do with form—aesthetics—which created a clinical image. Not surprisingly, Modern interiors are sometimes compared with operating rooms.

Tubular furniture aesthetics have rarely been elated, although all their properties are certainly aspects of the machine aesthetic. Only Charlotte Perriand, co-designer of Le Corbusier's tubular furniture, was excited with the polemic with John Gloag on tubular furniture: "[...] Aesthetic value. Metal plays the same role in furniture as cement in architecture. It is a revolution [...]. A new lyric beauty regenerating by mathematical science."¹⁶

The link with architecture and its aesthetic preference

could also express itself in a different way. For Mart Stam, a "hardcore" functionalist, the shape of the cantilevered chair was not determined purely functional. During the development of his chair at the firm Arneold in Schorn-dorf, he kept using thin tubes and sharp bends, making the chair sag with the first try-out and thus having to strengthen it. The cubicle shape had to correspond with its rectangular-shaped architecture. Later, during the process on the product rights of the chair (1931), the jury decided that, because of its sleek and rectangular shapes, it was an original. This was seen as the epitome of the *Neue Schachlichkeit*.¹⁷ Besides this personal relation between the chair and the architecture epitome, the cantilevered chair and the general endeavor for mobility and denial of gravity, also played a key role in architecture, for example in the *Wolkenbügel* and the *Lenintribune* by El Lissitzky [figure 5] or the *Peterschule* by Hannes Mayer in Basel.¹⁸ Another example of an alignment between furniture and architecture is the work of Mies van der Rohe, which was in fact the opposite of the work by Mart Stam. The *fauteuil* and the stool of Mies van der Rohe which were designed for the German Pavilion in Barcelona could be compared with his architecture. On the one hand the spatial continuity and on the other hand the walls and the layout of the furniture that was fixed and immobile. The furniture—the construction of which is open and transparent—suggests movement even if it is not there. The chairs were not foldable because the different chair pieces were welded together. The second parallelism relates to Modernity and tradition. The Pavilion is Modern with references of *De Stijl* and Suprematism but at the same time it has references to the classic tradition. The Modern material of the furniture with its bended lines of chromed steel is based on a tradition that dates from Ancient Egypt.¹⁹ Besides, the Pavilion and the chair had a representative role. The remakes of the chair are still used in that way.²⁰

Modern, functionalist furniture was connected since the beginning directly with architecture although this was only visible in the interiors of Modern architecture. Only a few manufacturers produced this steel furniture, so some architects such as Breuer, Eysselinks, Herbst, Hoste or Prouvé founded their own furniture companies although they were not all successful. With the acceptance of this new architecture around 1930, the new (steel) furniture became more popular but at the same time, the connection between furniture and architecture began to decrease. In 1929 the Dutch metal works Gispen was able to start developing steel chairs in 1929 thanks to the commission to furnish the Van Nelle Factory in Rotterdam. However, tubular steel chairs became more and more fashionable after 1930 and despite the economical crisis,

Gispen no longer depended solely on commissions by the avantgarde. The use of this furniture became broader than that of the functionalistic interiors. The number of sales of the furniture manufactures Thonet and Mauser, originated in Germany, shows that the increase of sales continued after 1933 until the end of the 30s, despite the fact that Modern architecture was officially in decline.²¹ This means that the steel tubular furniture became popular [figure 6] among the consumers and was not associated with functionalistic architecture. The dream of avant-garde architecture, with the use of new materials and throughout a serialized production that they wanted to make as inexpensive and practical furniture for the different layers of the society, was reached once the connection with the avant-garde was broken. The chairs of curved beech wood had no problem with this: since their origins in the 19th century they had never been connected to a specific architectural language.

Notes

1. Probably, the choice of the architect was done due to fashionable considerations and not because they had the same taste.
2. The most recent reference in Kuper, Marijke; Reitsma, Lex, *Rietvelds Chair*, Rotterdam, NAI Publishers, 2011, 36.
3. Idem, 101–102.
4. Idem, 127.
5. Idem, 64.
6. This name is a marketing name that Gino Gavina used in the 60s when the reissue of the chair was presented. Until then the chair had been called Clubessel B3.
7. Mácél, Otakar, *Der Hocker*, Ezelsoren, 2008, vol. I, n° 3, 101–109.
8. Geest, Zie J. Van; Mácél, Otakar, *The Museum of the Continuous Line*, Amsterdam 1988.
9. For *Weißenhofsiedlung* see Kirsch, Karin, *The Weißenhofsiedlung*, Stuttgart, 1999 (1987) and Pommer, Richard; Otto Christian F., *Weißenhof 1927 and the Modern Movement in Architecture*, Chicago-London, University of Chicago Press, 1991.
10. For the interiors see Gräff, Werner, *Innenräume*, Stuttgart 1928.
11. These were P. Chareau, G. Guevrekian, H. Hoste, Le Corbusier, A. Lurçat, W. M. Moser, R. Neutra, G. Rietveld, M. Stam, R. Steiger and S. Giedion. For Giedion see Lepel, Peter; Spies, Oliver, *Über Möbel*, Rütli, 2001, 89–91.
12. A survey of architects and furniture manufacturers of the tubular furniture of the interwar period can be found in Mácél, Otakar, *2100 metal tubular chairs*, Rotterdam, Van Hezik-Fonds 90 2006, 219–249.
13. Breuer, Marcel, *Metallmöbel und die neue Räumlichkeit*, Neues Frankfurt, 1928, II. jrg., n° 1, 11–12.
14. See e.g., Banham, Reyner, *Theory and Design in the First Machine Age*, London (1960) 1975, 207–213.
15. Gräff, Werner, op cit., 133.
16. Perriand, Charlotte, *Wood or Metal*, The Studio 1929, Vol. MC-MXXIX, 279.
17. Mácél, Otakar, *Der Freischwinger. Vom Avantgardeentwurf zur Ware*, Delft, 1992, 57.
18. See Vogt, Max Adolf, "Das Schweb-Syndrom in der Architektur der Zwanziger Jahre", Vogt, A. M., *Schriften. Die Hunde bellen, die Karavan zieht weiter*, Zürich 2006, 152–187; Hackenschmidt, Sebastian, "Form Follows Motion-Stühle in Bewegung", Ferus, Katharina; Rübeled, Dietmar, *Die Tücke des Objekts*, Berlin, 2010, 92–119.
19. Mácél, Otakar, "From mass production to design classics: Mies van der Rohe's furniture", Vegesack, Alexander Von; Kries, Matthias, ed.,

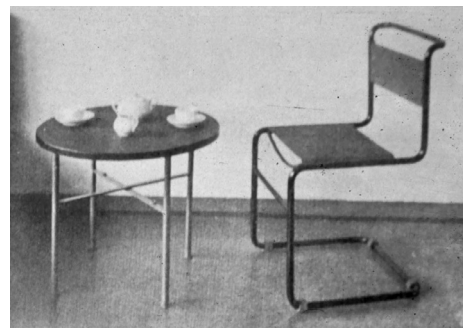
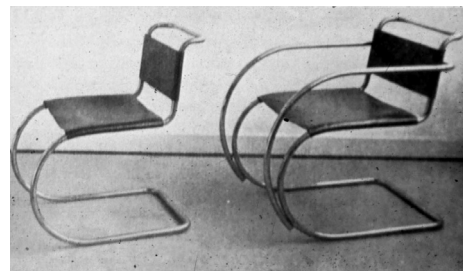


Figure 6. Chair by **M. Stam** and **Mies van der Rohe**, 1927, *Weißenhofsiedlung*, Stuttgart.

Mies van der Rohe: Furniture and Buildings in Stuttgart, Barcelona and Brno, Milano, Skira, 1998, 38–39.

20. Tegethoff, Werner, "Der Pavillonsessel", Reuter, Helmut; Schulte, Birgit, ed., *Mies und das Neue Wohnen*, Ostfildern, 2008, 171.
21. Mácél, Otakar, op.cit. 1992, 95–98. The increase in production also happened in other European countries.

Otakar Mácél

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Mies van der Rohe's Tugendhat House – Weightless Living

20



In his review of Franz Hessel's *"Spazieren in Berlin"*, Walter Benjamin noted that the author celebrated the "last monuments of an old culture [...] for which cosiness came first", but whose time had come. The new architecture transferred "the domicile of men [...] into a transit passage of all imaginable forces and waves in light and air. The future stands under the signature of transparency".¹ Two years earlier, Siegfried Kracauer wrote about the exhibition of the *Werkbund* entitled *"Die neue Wohnung"* (The New Home) in 1927. Here, the attempt "to undermine the former isolation of the individual by dismantling the external partition walls" became evident. But perhaps "only the anonymous existence of the mass bound to capitalistic economy is granted a voice".²

By Monika Wagner

The consciousness of fundamental changes in the architectural space by *Neues Bauen* and thereby for living and its significance for the subject as well as for society was widespread at the end of the 1920s. During the 19th century in European cities, the ramparts were pulled down so that they could expand across the enclosing walls. It was now the houses and domiciles, which were no longer considered strongholds of the individual or family, that opened up and became transparent. The deprivation of the enclosing armature for some meant liberation, for others it meant the destabilisation of privacy and individuality.³

Mies van der Rohe's Tugendhat House in Brno as an ideal realisation of a new overall conceptualisation not only of architectural space but of living itself, allows an exemplary reconstruction of what the transformations implied. On the occasion of the Stuttgart exhibition *"Das neue Bauen"* in 1927, Mies van der Rohe himself termed contemporary architecture "a link in the great struggle for new ways of living".⁴

Between 1928 and 1930, the house in the industrial town of Brno, which has recently been restored again, was built for the Tugendhat family.⁵ The architecture, fittings and furniture⁶ appear so weightless and with such an ease that they seem to almost allow a weightless living. This is chiefly due to the materials used and the way their surfaces are worked.

The first approach from the street already shows that horizontal stretch out, which in contemporary debates was connected to the "dynamisation" of all living conditions and specially to the new automobile traffic flow. "The horizontal, the sign for movement defeats the vertical with all its ponderosity of the earth" stated Walter Gropius in 1926,⁷ referring to the period's much discussed relation of load and support in architecture.

From the garden of the Tugendhat House, the small wall areas above the belt windows literally seem to float due to the steel frame construction. This was often described by contemporaries as a typical phenomenon of the new architecture of the 1920s and connected to the conquest of the sky by the aeroplane.⁸ This meant that even architecture—the genre that so far had been characterized by the ponderosity of the earth—corresponded to Friedrich Theodor Vischer's criterion of the arts, "the power to outplay heavy-weighted materials".⁹

The basic relation of horizontal and vertical, of dynamics and statics was newly adjusted during the 1920s and innervated with far reaching impact: "men of our time" declared the Berlin architect Erich Mendelsohn, "out of the excitement of a busy life, one can only get compensation from the idle horizontal".¹⁰ The vertical instead was connected to an architecture of power and intimidation, which to Siegfried Kracauer appeared to be an "upright act of violence".¹¹

Not only the horizontal structure of the floors, but also the materiality of the surfaces contributed in the Tugendhat House to the impression that gravity was overcome. Mies van der Rohe, the perfectionist among the architects of *Neues Bauen*, was well aware of the effects of high quality materials and the textures of their surfaces. Besides the often discussed transparency of the perfectly rolled plate glass¹² for the belt windows, which capture the ceiling height, the subtle plasterwork of the walls was also of enormous importance for the atmosphere of the entire building. Particularly in Brno, where the Baroque tradition of stucco work was still alive, Mies van der Rohe was able to return to craftsmen and their corresponding know-how as part of a commission that did not impose any constraints.

Thanks to the intensive historic examination of the architecture and the minute analysis of the materials brought to light by Ivo Hammer, thus benefitting the recent restoration of the Tugendhat House, the assumption of a purist smooth surface in aseptic white is contradicted.¹³ In the

<. The Tugendhat House by Ludwig Mies van der Rohe, 1928-1930.

Tugendhat House, the plaster of the outer lime skin exhibits tiny yellowish, brownish or reddish sand grains,¹⁴ which emerge stronger by abrasion and affect the texture of the wall. The surface owes its visual brilliance to the addition of the sand, for where the grains appear on the surface they reflect minute particles of light. Thereby the extremely lively skin of the building emerges, which is permanently modified by the moving light incidence and one's own movement. The hardly discernible modulations are decisive for the atmospheric effect. At close range, the tiny mounds prove to be subtle tactile offerings, while from a distance with their equally tiny shadows they appear as visual variations of the bright surface which they allow to become undulating and weightless.

Similarly, this also applies to the interior of the Tugendhat House. The lavishly floating living room opens on two sides towards the garden thanks to the continuous belt windows. It may depend on the light and the weather if the surrounding nature is considered more as a "wallpaper" in the sense of a closure or as an opening of the architectural space.¹⁵ The room with its open, floating floor plan is structured in a sophisticated manner.¹⁶

On the one hand, there is a curved niche of the dining area made of the rare tropical Makassar [figure 1] and, on the other hand, there is a free standing onyx wall which separates the library from the living area. Both elements—wood and stone—with their polished surfaces bring elements of nature into the interior. The continuous vertical brown and black wood grain of the exquisite wood and the grand veined onyx are ornaments of nature itself.¹⁷ Following up Adolf Loos, it belonged to the rules of the aesthetics of materiality, that "the simpler it is, the more distinguished the material has to be, for compensating by the display of its appeal for the lack of decorative ornaments".¹⁸ Grete Tugendhat reported that Mies van der Rohe had also mentioned during a conversation on the planning of the Tugendhat House in 1928 "how important the use of fine materials was, particularly in Modern, unadorned rooms".¹⁹

In the large room, the half-cylindrical dining area opening towards the windows and the garden surrounds an equally round table with steel-tube chairs. Due to the cylindrical form and the vertical pattern running from the floor to the ceiling, the origin of the wood from a huge tree is suggested. This niche seems to assume the function of a haven and it marks the daily meals as collective rituals of the family. The free standing, polished onyx wall, which runs parallel to the long line of windows to the garden, reflects in its cloudy, veined and grained surface the sky as well as the plants of the winter garden and the garden outside [figure 2]. Thus unfolds a sophisticated intersection of various materials as well as images of na-



Figure 1. The dining area with the Makassar wall.

ture, of the eternal and the ephemeral, of stability and mutability.

Both of the elements structuring the room, elegantly recall the traditional heavy building materials, wood and stone, and remind one through their height of their former architectural function of support. In contrast, the shiny chrome-plating camouflages the static function of the grinders [figure 3]. The Makassar niche and the onyx wall are complemented in their function to graduate the room by a textile partition materialized in bright and dark velvet and silk curtains. They do not only make it possible to conceal on demand the enormous windows in order to prevent reflections, as Grete Tugendhat explained,²⁰ but they also create temporary compartments within the living room. To form spaces by textiles ties in with Gottfried Semper's understanding of architecture as originally deriving from textile protection. The sporadic subdivision of the living room by monochrome panels suggests furthermore the actual temporary feature, which Mies van der Rohe and Lilly Reich designed in 1927 together for the Berlin exhibition "*Die Mode der Dame*" (Fashion for the Lady). For the exhibition café, with its programmatic name "*Samt und Seide*" (Velvet and Silk), they used the same textile materials, silk and velvet, as in the Tugendhat house. From different heights of the Berlin *Funkhalle*, generously falling coloured velvet—and silk panels produced flexible space compartments in the "floating space [figure 4], which offered open and intimate spaces for abidance".²¹

When Justus Bier, the curator of the Kestner Museum in Hanover, critically questioned the living facilities of the Tugendhat House in 1931, he concluded that its architecture forces "the inhabitants to perform an unbearable exhibition living [...] which overwhelms their personal life".²² Fritz Tugendhat heavily dissented,²³ while the well-informed Bier had perhaps not only Mies' Barcelona Pavilion and its transparency in mind. Rather, the Berlin

exhibition “*Samt und Seide*” with its textile walls offered a reference for textile subdivisions in Brno. Moreover, the exhibition café was furnished with prototypes of steel-tube chairs, among them Mies’ newly developed cantilever chair,²⁴ which the author specially ordered plated with polished nickel.

In the Tugendhat House, the cantilever chairs as well as the other furniture, such as seats, tables and cabinets, also contribute to the atmosphere of immense lightness in the large living room. All of them have steel tube “legs” and “feet”. Because of the light reflection on the silvery gleaming metal, the elegant curves or the slim legs which carry the seat, the tabletop or the cabinet almost dissolve visually.

Even the cabinets themselves seem to float above the floor since their steel tube legs are recessed. This impression is reinforced where the steel tube furniture is placed on the bright and shiny linoleum, which reflects the polished metal while the ornamental carpets [figure 5], which form islands on the overall linoleum floor, visually integrate the thin bases of the cantilever chair or the legs of tables in their patterns.

In the light of the widespread interests in the overcoming of gravity, it comes as no surprise that the designer Marcel Breuer, who himself had developed steel furniture at the Bauhaus, in 1926 self-deprecatingly commented the development of seats from a wooden chair via a steel-tube chair up to sitting on an “elastic air column” in a “filmstrip” [figure 6]. Though Mies van der Rohe himself developed dematerialisation strategies in architecture and design he never abstained from the potentials of tactility. In the Tugendhat House the visual qualities of shiny metal and transparent glass are contrasted with the haptic desire that wood and velvet arouse. All these materials contribute to a festivity of the senses.

Notes

1. Benjamin, Walter, “*Die Wiederkehr des Flaneurs*”, *Gesammelte Schriften*, Hella Tiedemann-Bartels, Frankfurt, 1980, III, 187f.
2. Kracauer, Siegfried, “*Das neue Bauen*”, *Siegfried Kracauer Schriften*, Inka Mülder-Bach, V. 2, Aufsätze 1927-1931, 69.
3. See the discussion about living qualities of the Tugendhat House in *Die Form* 1931.
4. Mies van der Rohe in the Introduction to the exhibition catalogue “*Die Wohnung*”, Fritz Neumeier: *Mies van der Rohe. Das Kunstlose Wort*, 319.

Figure 2. View of the house from the garden.

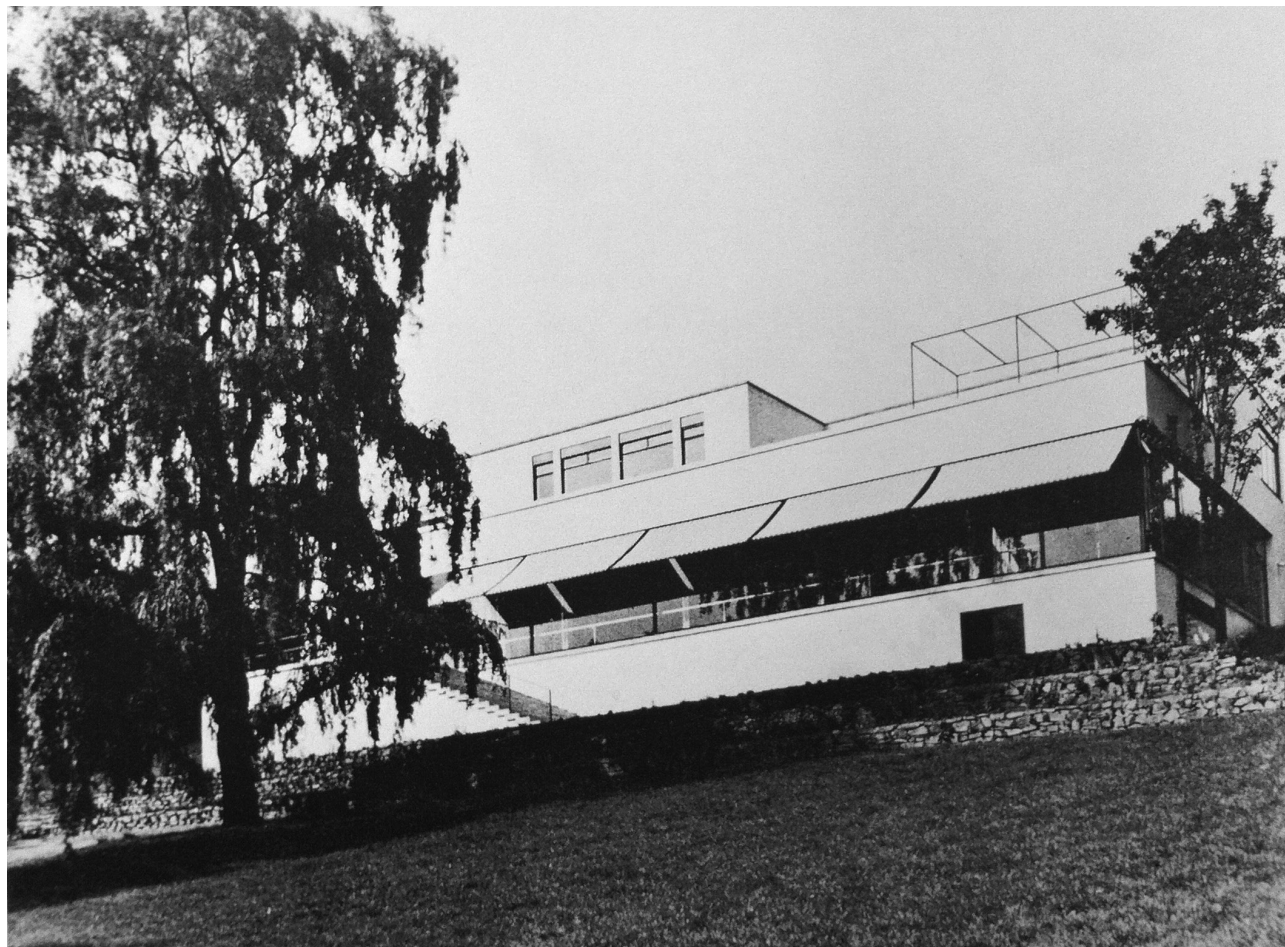




Figure 3. The chrome-plating camouflages the static function of the structure.



5

Figure 4. *Samt und Seide*, Berlin, 1927. **Ludwig Mies van der Rohe** and **Lilly Reich**.

Figure 5. The ornamental carpets.



4

5. Among the many titles see: Hammer-Tugendhat, Daniela and Tegethoff, Wolf, ed., *Ludwig Mies van der Rohe. Das Haus Tugendhat*, Springer, Wien, New York, 1998.
6. Among the present furniture are many replicas—consequently the patina of a private house that people lived in, is missing.
7. Walter Gropius, “Glasbau” (1926), Probst, Hartmut and Schädlich, Christian, *Walter Gropius: Ausgewählte Schriften*, Berlin (DDR), 1987, 3, 103.
8. See Ilya Ehrenburg (1929), *Visum der Zeit*, Leipzig 1982, S. 94 with a description of Gropius’ Bauhaus building in Dessau.
9. Vischer, Friedrich Theodor, *Ästhetik oder Wissenschaft vom Schönen*, Bd.III, Stuttgart, 1852, S. 15.
10. Erich Mendelsohn, “Die internationale Übereinstimmung des neuen Beugedankens oder Dynamik und Funktion” (1923), Heinze-Greenberg, Ita and Stepan, Regina, ed., *Mendelsohn: Gedankenwelten*, Ostfildern 2000, 48.
11. Siegfried Kracauer (see note 2), V.3, 152.
12. Monika Wagner, “Immaterial Materials”. The Tugendhat House within the context of the aesthetics of materials, Cerná, Iveta and Hammer, Ivo, ed. *Materiality*, Brno, 2008, 26–32.
13. Ivo Hammer, “The project of conservation/restoration research at Tugendhat House. Materials and surfaces of the rendered Façades”, *Materiality* (see note 11), 164–172. Ivo Hammer: The material is polychrome! From interdisciplinary study to practical conservation and restoration: the wall surfaces of the Tugendhat House as an example, MS, to be published in the proceedings of SUPSI, autumn 2012. I am grateful to Ivo Hammer who let me see his manuscript of the article.
14. Ivo Hammer: with detailed data (see note 13).
15. Quetglas, Josep, *Der gläserne Schrecken. Mies van der Rohe’s Pavilion in Barcelona*, Basel u.a 2001, S. 86. For a further discussion see Wagner (as note 12). Grete und Ernst Tugendhat.
16. Wolf Tegethoff, “Ein Wohnhaus der Moderne im Spannungsfeld seiner Zeit”, *Ludwig Mies van der Rohe. Das Haus Tugendhat*, Hammer-Tugendhat, Daniela and Tegethoff, Wolf, ed., Wien, New York 1998, 43–100.
17. Monika Wagner (see note 12), 30.
18. Pazaurek, Gustav E., *Guter und schlechter Geschmack im Kunstgewerbe*, Stuttgart, Berlin 1912, S.
19. Quoted in Ivo Hammer, “Rohe – Restaurierung. Zur materiellen Erhaltung des Hauses Tugendhat in Brünn und anderer Denkmale des Neuen Bauens”, Cramer, Johannes and Sack, Dorothea (Hg.), *Mies van der Rohe. Frühe Bauten. Probleme der Erhaltung. Probleme der Bewertung*, Petersburg 2004, S. 12
20. Grete Tugendhat in: *Die Form. Zeitschrift für gestaltende Arbeit*, 6, 1931, 11, 437, reprinted in: Hammer-Tugendhat, Tegethoff, (as note 5), 35.
21. Rupert Shaldrake, “Typ und Prototyp: Der Freischwinger für Stuttgart 1927”, Reuter, Helmut and Schulze, Birgit, ed., *Mies und das Neue Wohnen*, Ostfildern 2008, 118.
22. Quoted in: Wolf Tegethoff, “Ein Wohnhaus der Moderne im Spannungsfeld seiner Zeit”, Hammer-Tugendhat, Daniela and Tegethoff, Wolf, ed., *Ludwig Mies van der Rohe. Das Haus Tugendhat*, Wien, New York, 1998, 87.
23. Letter from Fitz Tugendhat to the editor of the Werkbund periodical *Die Form*, published in 1931, 9, 438.
24. Cf. Sebastian Hackenschmidt: “Cantilevered. Chairs as Material Experiments”, Exhibition-catalogue *Frei schwingen. Stühle zwischen Architekturmanifest und Materialexperiment*, Vienna 2006, 31–54.

Monika Wagner

Studied painting, art history, archaeology and literature. She is teacher of Art History at the University of Hamburg since 1987. The focus of her publication activities since mid 1990s has been on the significance of materials and substances. She developed a completely new approach to the understanding of Modern art in the book *Das Material der Kunst*, 2001.

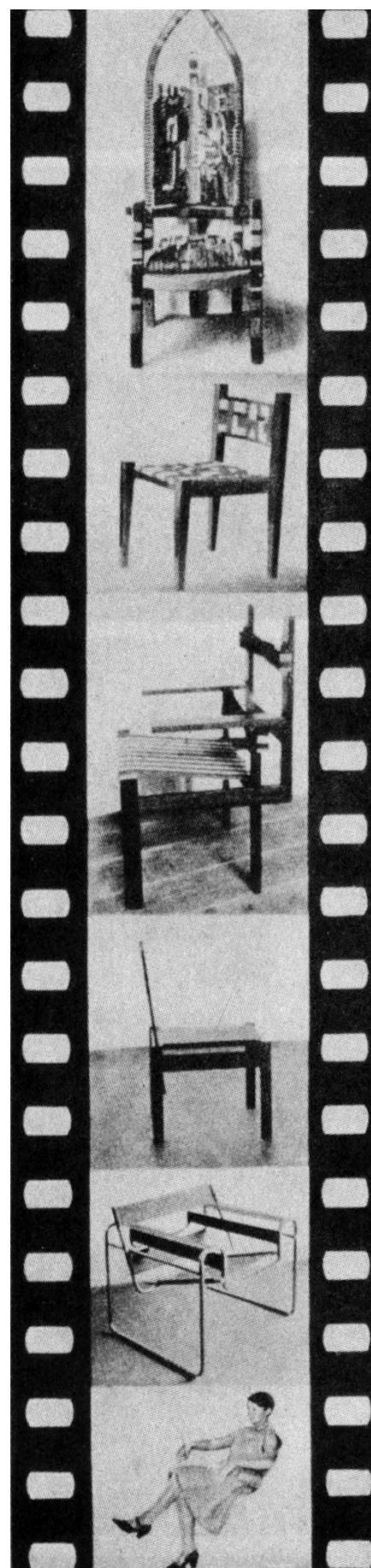


Figure 6. Marcel Breuer's film strip, 1926

Investigation and Production of Furniture for Villa Tugendhat 2009–2012

26



Villa Tugendhat is an expression of “*gesamtkunstwerk*”, where every detail is subordinated to the whole. Mies van der Rohe devoted the same amount of attention to the furnishings of the house as to its design. The furniture designed and placed according to his conception is such an important aspect of the house that without it the Villa is only half complete. The system governing the organization of all parts of the building—ratios, proportions, whole areas and details—is visible also in the precise placement of the house contents, which only allowed the owner limited variability in the use of space.

The Villa became world famous not long after its completion, but Fritz and Grete Tugendhat were not destined to spend many happy years there. Even before the Munich Pact had been signed, signifying the *de facto* end of democratic Czechoslovakia, they left Brno forever.

At the end of the summer of 1938 two removal vans came to take part of the furnishings to St. Gallen in Switzerland. Today the main body of the original equipment is, except for several pieces, still in the possession of the family.

The Villa was, after two years of general reconstruction, reopened to the public in February this year. For the first time since 1938 it was equipped with all the furnishings Mies van der Rohe had designed for it. The most significant event was the return after seventy years of the original curved wall of the dining area to its original location. This famous Makassar wall had been considered lost for many decades.

By Miroslav Ambroz

The course of the reconstruction of the Villa is an interesting chapter in itself within the already rather convoluted history of the house, and one which will hopefully one day be given an objective treatment. The controversial tender announced in 2003 to select a designer and the legal repercussions that followed certainly weren't a particularly respectful preface to the reconstruction of such an internationally significant modern architectural monument. The court verdict in December 2006 was clear: the winning team of architects should not have even taken part in the tender as they failed to fulfill its basic requirement, and that was valid authorization. The city had however spent nearly 10 million crowns on the design project and so decided to use it anyway. Fortunately, the city decided to create a committee made up of primarily foreign experts in modern architecture, the Tugendhat House International Committee (THICOM), which was able to influence the course of the whole reconstruction to a significant degree. Prof. Dr. Ivo Hammer, an expert in the conservation of mural painting and architectural surfaces, was chosen as chairman of the committee.

The project specifications did not include the use of items from the original furnishings of the house. The interior was to be equipped with replicas of the original furniture; these would be supplemented by a 'representative exposition' featuring several period (though unauthentic) items in order to create a believable atmosphere: a vintage car in the garage; an old washing machine in the

laundry room; photographic equipment in the darkroom. It was planned that all seating furniture would be supplied in the form of standard off-the-shelf models from the current product range offered by Knoll International.

At the end of 2009, thanks to my discovery of the lost Makassar wall, the tender for the provision of interior elements and the restoration of the wood surfaces was won by the firm AMOSDESIGN. I had carried out research for that company and participated in the preparation of documentation for the production of authentic replica furniture. It immediately became clear during the first introduction to the project¹ that it would be necessary to reassess the approach to the whole issue of the restoration of the original interior and take it to a totally different level. This aspect had evidently been totally undervalued both during previous research into the building's history² and at the level of the project documentation.

During the reconstruction of the interior our attention was concentrated primarily on the creation of the most faithful replicas of the original furnishings as possible, including seating furniture. For this reason it was necessary to carry out exhaustive primary research, which not only involved pictorial documentation—i.e. original drawings and photo documentation—but also the study and exact measurement of surviving original pieces. During this work I was fortunately able to draw on my previous archival studies and an archive built up over the years.

During 2010 I studied the project documentation for



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Villa Tugendhat in the archive of the Museum of Modern Art (MoMA) in New York. The Mies van der Rohe archive owns around 430 drawings connected with the building and surprisingly none of the originals of these drawings or other documents stored there had been seen before my visit by any of the designers involved in the project. The designs for the interior housed at the MoMA archive consist of 40 drawings, though some of them are only unused variants or studies. While at the MoMA depository I also documented several pieces of furniture of which the most valuable are without a doubt two original Tugendhat armchairs from the Brno Villa. For reference purposes I also viewed later drawings of furniture stored at the Avery Library (Columbia University, New York). I gained further fundamental knowledge during a series of study trips in Europe: in Krefeld (Haus Lange and Haus Esters), and through the viewing of furniture in the property of the Tugendhat family, the heirs of Mies van der Rohe, private collectors and other museum collections.

I consulted various experts in the relevant fields to solve problematic questions regarding e.g. attachments, the materials used or the completion of parts. This mainly involved the solving of questions that could not be answered even by reference to the original drawings, as they did not contain as much detailed information as is typical today. In the course of this work I therefore made contact with the team of Prof. Tegethoff, leader of the research project "*Kommentierten Werkverzeichnis der Möbel und Möbelentwürfe Ludwig Mies van der Rohes*". I gained a great deal of valuable knowledge regarding metal furniture production technology from Prof. Dr. Ing Friederik Deuerler and Dr. Johannes Deuerler, who are members of the research team. I informed the foreign experts from THICOM about the results of my research and its progress on June 29, 2011 and also revealed the fate of the Makassar wall.

Seating furniture

Metal furniture—chairs and tables manufactured from steel tubing and flat steel bars—form a relatively special chapter in the context of the whole reconstruction of the Villa. The early models of furniture products designed by Mies were on the level of prototypes, differing from one another in details stemming from the technical production capabilities available at the time. The furniture for the

Villa was manufactured at the *Berliner Metallgewerbe Josef Müller* workshop—from 1931 it was known under the name *Adolf Bamberg Metallwerkstätten Berlin-Neukölln*, before closing down shortly after. The furniture made from flat steel bars was manufactured to order as it was extremely expensive.

For the design of metal furniture it was necessary to focus on the surviving authentic pieces demonstrably originating from the Villa, or at least such pieces as are identical to the originals in their production date and design. At the depository of the Museum of the City of Brno I was successful in ascertaining that two Barcelona chairs kept there were originals from Villa Tugendhat. A most valuable thing about those chairs is that the original straps and stuffing have survived with them. The chairs have been damaged heavily; one of them has been painted brown. However, they played an invaluable role in the production of authentic replicas. In cooperation with Prof. Dr. Ing Friederik Deuerler and Dr. Johannes Deuerler I even obtained x-ray images of joints in order that the design documentation could be prepared exactly according to those originals.

In the case of the tubular Brno chair, a tubular chair with parchment upholstery from an apartment belonging to the architect Philip Johnson was used as the model, as it was manufactured at the same time as the chair for the Brno Villa. The only flat-bar chrome-plated Brno chair from Grete Tugendhat's room exists in a private collection in the USA and was, together with the Barcelona ottoman, measured and drawn at a scale of 1:1.

Most of the discovered drawings for the seating furniture come from the year 1931, which fits the time when the contract was signed with the firm Thonet Mundus. In the 1950s in Mies' studio in Chicago new drawings were created in preparation for the mass production of Barcelona, Brno and Tugendhat chairs, now conforming to American dimensions, standard profiles and Modern production/material-working techniques. These drawings became the basis for the product range offered by Knoll and many other manufacturers.

Knoll performed various changes, adaptations and other excursions from the original in stages over the years, increasing the difference between today's product and the original still further. The comparison of drawings of the original furniture and current versions of the individual models reveals differences that are often surprisingly dramatic. They primarily involve the general dimensions, the shapes of the curved bars, the steel used, the construction and profiles of the elements used (originally 35x11mm, today 30x14mm), attachment details, joining elements (crosshead screws), and also differing production techniques (welding instead of connecting the frames from

Figure 1, 3, 5. The main living space

Figure 2. Chaise-longue

Figure 4. Brno chair in the dining area with restored Makassar wall

Figure 6. Two Barcelona chairs

© Photos by Miroslav Ambroz

several pieces after they have been chrome-plated–necessitated at the time by the dimensions of the baths used for chrome or nickel plating). The final finishing work is a chapter in itself: upholstery, colors and materials–here the differences are even more marked (surface finish of leather, straps, stuffing, hand sewing instead of the zips used today, etc.). It is thus logical that today's products and the items from 1930 have more aspects that are different than they have in common.

One of the most problematic parts of the reconstruction of the Villa's interior is naturally the issue of textiles, upholstery and covering material. At her Brno lecture of January 17, 1969 Grete Tugendhat described a great many details with regard to the materials and colors used. She supplemented this orally during a visit to the house accompanied by Arch. Kalivoda and Arch. Czernay on April 26, 1970. This information has been extremely important for us.

I consulted many specialists³ on issues concerning covering materials and their appearance in collections, and also the possible alternatives to the original upholstery. All research into furniture took place in close cooperation with the design section of the firm AMOSDESIGN headed by Ing. Arch. Vladimír Ambroz, who devoted exceptional effort and a great deal of time to the successful resolution of all details. The result of the premanufacturing phase was 192 detailed technical drawings for wooden furniture parts and 42 drawings of metal furniture at a scale of 1:1.

Before the realization of the decision to create totally faithful replicas of seating furniture there was a period when it seemed that the drawings would, in the end, remain unused.

The investor was concerned about the possibility of a court case over perceived copyright violation. This state of uncertainty was eventually resolved when the descendants of the architect Mies van der Rohe gave their agreement to the once-off non-commercial production of his furniture for the purposes of museum exhibition. Thus, in October 2011 the production of metal furniture could finally begin. 17 sub-contractors from five countries were involved in this extremely technically demanding project, with the final assembly of the individual parts being carried out in Brno at AMOSDESIGN. The last delivery of frames for the most complex part–the Barcelona and Tugendhat chairs–arrived in Brno only 14 days before the grand opening of the Villa. On February 29, 2012 the house, including its reconstructed Makassar wall and furniture, could be ceremonially reopened.

Notes

1. Sdružení pro Vilu Tugendhat (Association for Villa Tugendhat) headed by OMNIA projekt, s.r.o.
2. Ksandr, Karel et al., *Vila Grety a Fritze Tugendhatových* (The Villa of Grete and Fritz Tugendhat), Stavební Historický průzkum (Building History Research), Prague; Státní ústav památkové péče (State Institute for Monument Preservation), 2001.
3. From the many specialists involved I would like to name: Ivo Hammer, Arthur Rüegg, Wessel De Jonge, Wolf Tegethoff, Otakar Mácel, Prof. Thomas Meyer zur Capellen (Hamburg); Andreas Nutz, Angela Völker, Bernd Polster, Axel Bruchhäuser, Linda Carlson (Avenir Museum of Design and Merchandising, Colorado State University); Karen J. Herbaugh (American Textile History Museum, Lowell); Caroline Pinon (Musée des Arts Décoratifs, Paris); Charlotte Ann Jirousek (Cornell University); Virginia Gardner Troy (Berry College); Eva Uchalová (UPM Prague); Prof. Dr. Magdalena Droste; Daniel Milford-Cottam (Victoria & Albert Museum).

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Miroslav Ambroz

Independent researcher and art historian, expert and appraiser of art; 1994 Municipality of the City of Brno, Department of Historical Monuments; 2001 fine arts conservation consulting expert for several architectural companies and government institutions, including the Department of Historical Monuments Protection; 1995 Department of Historical Monuments Protection, Brno art historian expert for reconstructions of historical buildings and monuments; 2001–2005 Moravian Gallery, Brno, fine and applied arts expert, exhibition curator, appraising and authenticating documentation, head curator of the exhibition project 'Vienna Secession'.



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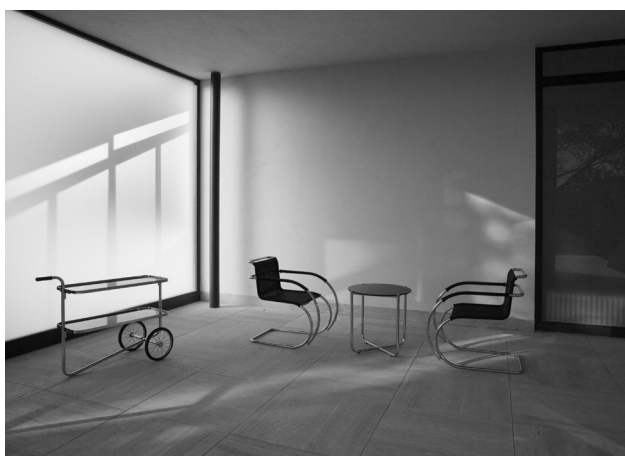


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Figure 7. The frame of the replica of the Barcelona chair was assembled from 14 parts.

Figure 8. The frame of the original Barcelona chair from the Villa Tugendhat made in the winter of 1930.

Figures 9, 10. The replica of the Barcelona chair in the upholstery workshop. February of 2012.

Figure 11. Serving cart, MR armchairs and round table on the terrace.

Figure 12. Bedroom of the Governess, replicas of the wooden furniture.

© Photos by Miroslav Ambroz

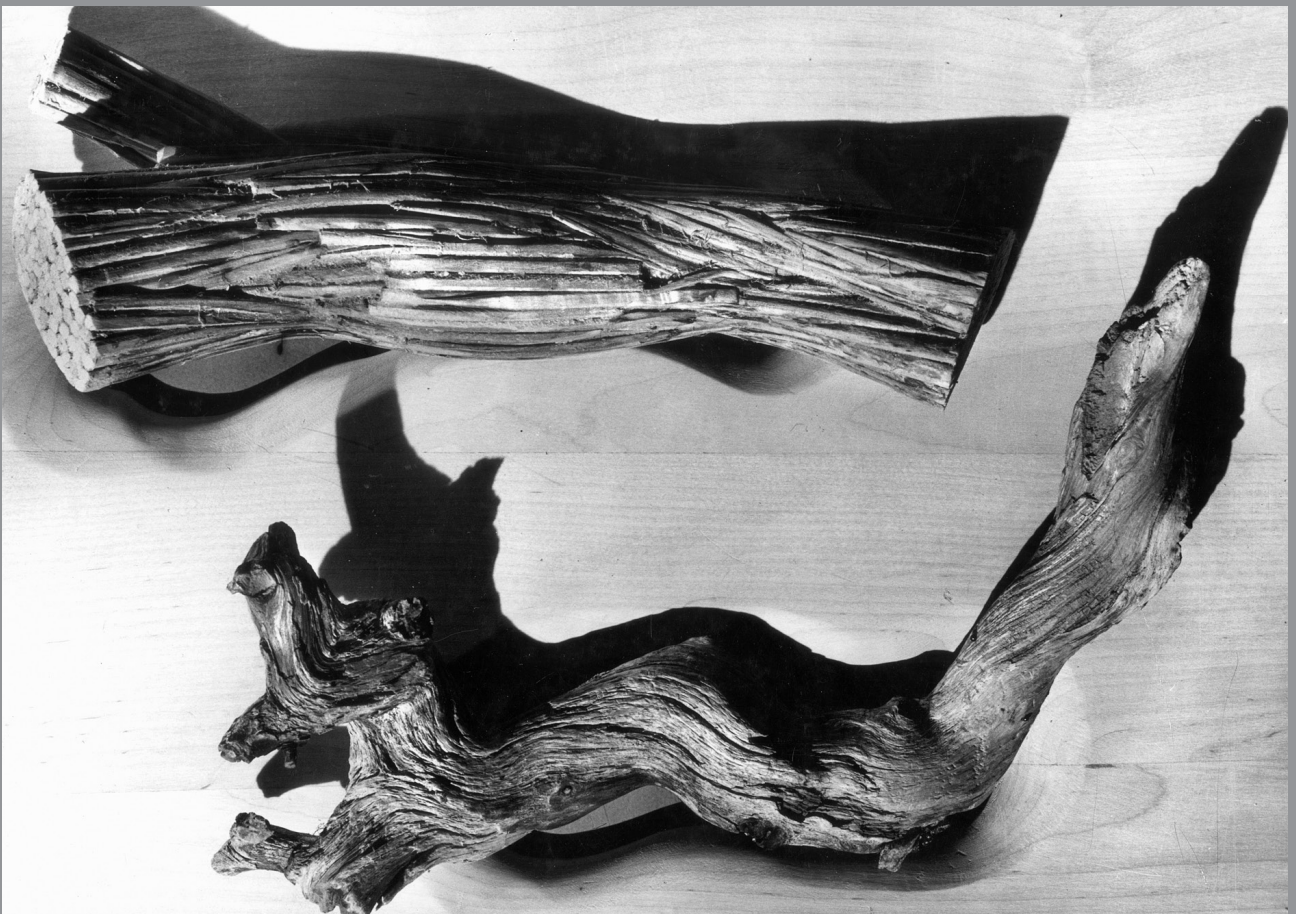


12

Modernism in Finnish Furniture Design and Production



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When looking at the development of Modernism in Finnish furniture design from abroad the conventional image is Alvar Aalto's Paimio chair descending in 1931 into a desert of traditionalism and starting a new, bright era of Modernity. This cliché is partly, but only partly true. In the following I will outline some major trends in design, use of materials and techniques of production in Finnish furniture before World War II.

By Pekka Korvenmaa

As has been made clear in numerous studies, Modernism entered Finnish architecture quite precisely around 1930, vanguarded by Aalto but also by other protagonists of Modernity as it was already demonstrated by the continental avant-garde and by examples in neighboring Nordic countries. But the production of buildings and furniture have quite different parameters and speeds. Serial product design demands not only a designer and client–user, consumer—but also a context of industry, marketing and distribution. Serial factory production does not in itself lead to Modern products although it is a prerequisite for it.

Furniture industries were among the first ones in Finland to enhance their product lines through professional designers. Among design professions architects used historically to dominate even furniture design which is well exemplified in the oeuvre of Eliel Saarinen. But in the 1920s new designer professionals emerged, coming from the Central School of Applied Arts. Thus, designers like Werner West were now employed by the rapidly emerging furniture industries from the late 20s onwards. The products themselves displayed variations and modifications of historical period styles or of the vernacular sphere. Material was solid wood, although plywood was already used as seats in lightweight chairs of anonymous design. But plywood together with other sorts of laminations came to be the medium for Modernism to enter. This was natural in a country with the abundance of birch forest and a high-level industry to process it. Finnish industries lived from forest and state-owned laboratories and they were developing and testing new ways to exploit these vast resources, not only via chemical processing into pulp and paper but also in the realm of mechanical wood utilization.

< The basic supportive element for most of Aalto furniture since 1935 in various scales. This invention made it possible to create a 90-degree angle by using solid birch wood (refer to text for further information).

< An example of Aalto's experiments on how to reach from nature to industry. Below a "natural" object, on top a man-made experiment of gluing together wood particles. Photo: Kolmio. © Museum of Finnish Architecture.

So, when the tidal wave of Modernism reached Finland with architecture as flagship it naturally brought with it the need for furniture suiting the new idiom. Architects such as Aalto and Pauli Blomstedt also designed furniture, here following the example of Saarinen, to match their interiors. Often, especially in the case of Aalto, they were commissioned for a public building but became later more widely available as spin-off products. But before going into Aalto's groundbreaking role and wood let us ask: when the continental paragons in Modern furniture by Breuer, Mies and Le Corbusier were realized via tubular metal, how were these formal and technical solutions adapted to Finnish conditions? In building design and production this question was not so pertinent but in serial furniture production questions of price of material, its availability and production conditions were highly relevant regarding the product and its final price. It is a very different case to design and execute a luxurious villa like Villa Mairea than to keep a product line profitable and the company surviving.

Modern furniture of domestic design and production adapting chrome-plated steel tubing certainly made their entry also to Finland in the early 30s. A main figure in their design was Pauli Blomstedt but also several companies produced anonymous furniture such as bed-sofas, cafeteria furniture and items for barber shops. But after a brief enthusiasm, furniture of this kind remained mostly in the public sphere. They were also ridiculed by the press as "anti-furniture" and shunned by the great majority from doing home purchases—that is, for urban homes in a country which up to the 50s was predominantly agrarian. One did not buy avant-garde to serve the functional and cultural needs of a farmstead. So, how did the alternative, Modernism in wood and mainly spearheaded by Aalto, evolve?

The plethora of studies and writings on Aalto—also by the author—has covered exhaustively his furniture design. But here some key points to track the path from daring experiments to everyday public and household items all Finns know and cannot avoid using, so topical they are especially in various public circumstances. And, beyond this, there is the international consumption of which an illumi-



Figure 1. Interior of the Café Fazer in Helsinki from 1930. Architect and interior designer: **Jarl Eklund**. Photo: Roos. © Museum of Finnish Architecture.



Figure 2. *Hotelli Helsinki* (Hotel Helsinki) room, 1930. Architect and furniture designer: **Pauli E. Blomstedt**. Photo: Apollo. © Museum of Finnish Architecture.

native case of co-branding is the use of Aalto high-stools painted white in Apple stores. As said above, serial product design always needs an industrial facilitator. In this case the collaboration of Aalto and the innovation-eager furniture producer Otto Korhonen was seminal. The industrialist was out looking for novel products, Aalto searching a mechanism to realize his design concepts. This synergy led to a collaboration upon which the family-based Furniture Manufacturer Company Korhonen is still, in the third generation, able to thrive by relying on designs by Aalto dating to a great deal from eighty years ago.

The innovative aspect of the early Aalto furniture was twofold, technical and formal. Technically the main point was to develop-together with Korhonen's expertise-ways to use different kinds of birch wood lamination and bending frames, and also laminated frames. The results were manifested in the so-called Paimio chairs, originally designed for the Paimio Tuberculosis Sanatorium by Aalto in 1931. Both their laminated and to the users weight reacting seat-back unit and their one-piece frames were truly revolutionary in their own time in Finland and to great extent also internationally. But the most significant innovation was what was to become the basic element for most of Aalto's furniture: the leg unit which bends in a 90-degree angle. For this Aalto was able to secure an international patent and—*nota bene*—not a copyright of shape but a technical patent. The solution was based on sawing narrow cavities in solid birch, inserting in them glue and thin pieces of veneer, heating the item and bending it. The result acted as a piece of monolithic birch wood. This unit, in various scales, opened the way for a vast collection of different kinds of furniture.

But how were these technical solutions in wood to be put into service of a Modern design approach? I would say that Aalto performed a double trick where the technical and formal are intertwined, the technical providing a solution for the design and vice versa. The main issue was to re-interpret the continental examples into domestic technical know-how and materials which were more available and cheaper than steel tubing. The solution, as exemplified by the Paimio chairs, is both aesthetically and technically convincing and, at the same time, the use of wood entailed a certain domesticity at least in Finland, the land dominated by an environment traditionally realized in wood. We cannot forget the fact that these were not merely formal Modern experiments: we may compare the usability and comfort between these and, for example, Rietveld's famous reclining chair.

From today's situation, saturated by Aalto furniture from eight decades—they are not retro or re-launches but have been in continuous production—it is hard to perceive their novelty at the time they were introduced. The move

from commissioned furniture into the realm of spin-offs serving private consumption was not self-evident. They, especially chairs, were strikingly different and demanded a certain effort from the consumer to prioritize them over other items on the market. Their private market coverage in Finland in the 30s was not remarkable. Internationally they won high acclaim for example in Great Britain, Switzerland and lastly in the US. The manufacturer, who depended on labor-intensive practices, was not able to meet the international demand. But, knowing the apparent success of this furniture especially after World War II, raises a question: if Aalto had the designs and the producer believing in him, what about the necessity of marketing and distribution? As we know, many great designs have stumbled on this factor in the chain from design to consumer and the inherent market revenue.



Figure 3. "Paimio" chair designed for the Paimio Tuberculosis Sanatorium by **Alvar Aalto**, 1931. Photo: Pietinen. © Museum of Finnish Architecture.

Here we come to the remarkable and rather exceptional palette of a supporting context Aalto had at his disposal. In 1935 the company Artek—still highly operative today—was founded, supported and realized mainly by Maire Gullichsen, the heir of the industrial empire of Ahlstrom Ltd. Artek was to propagate a Modern culture of furniture, interior design and related objects. The main sales objects were Aalto furniture and in addition to that Artek provided commissioned interiors, also equipped with Aalto items. So, from 1935, Aalto had a "full hand": his designs, the supportive producer and a marketing and distribution unit. This symbiosis and its continuing existence is quite unique in the history of Modern furniture. It also explains the wide and historically deep presence of Aalto furniture, especially in Finland.



Figure 4. "Paimio" chair version B. Both "Paimio" chairs demonstrate the use of laminated birch wood, in the seat and in the frame. Photo: Pietinen. © Museum of Finnish Architecture.

I have outlined the conditions for the emergence and continuous production of the so-called Aalto range of furniture. Its "Modernity" is displayed on many levels. It covers Aalto's design intentions, the role of the daring industrialist, the quest for Modernity by the wealthy patroness and the conceptualization of the design-driven enterprise Artek. But, this story is not typical but on the contrary atypical not just in Finland but also internationally. And we have to bear in mind that when approaching the late 30s a multitude of producers in Finland were hiring designers—not architects any longer—to modernize their product portfolio. The fruits of this were to be collected after World War II when the mature profession of furniture and interior designers emerged. We can justly assert that what Aalto and his providing context had achieved before the war set a certain standard.

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Artek and Alvar Aalto

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Artek was founded in November 1935. The name of the company, Art + Technology, reflects its objectives and methods of operation. The intention was to offer to its wide range of customers, practical, economical, hygienic and above all Modern furniture that reflected its own time. The furniture was to represent the values of an urban and efficient lifestyle.

In the company's founding meeting on 26.11.1935, Maire Gullichsen and Alvar Aalto became the main shareholders. Other shareholders were: Nils-Gustaf Hahl, Artek's first managing director; P.W. Puhakka, the managing director of Huonekalu- ja Rakennustyötehdas, the company that produced the furniture designed by Aalto; Aino Marsio-Aalto; architect Aili-Salli Ahde; professor Carl Hahl; and architect Arne Ervi.

By Mia Hipeli

Marketing

Alvar Aalto-designed furniture rapidly became popular in the 1930s, particularly after the Aalto-designed Paimio tuberculosis sanatorium, Turku Sanomat building and Viipuri Library had been presented in the press. The marketing of the furniture was promoted through housing exhibitions. Already the Bauhaus-inspired Minimum Apartment Exhibition held in Helsinki in 1930 acquainted Helsinki inhabitants with a new kind of interior design based on lightweight movable furniture and standard dimensioned interiors. The content of the exhibitions was educational, pedagogical, and enlightening.

The exhibition "Only Wood" held in the Fortnum & Mason department store in London in 1933 opened an opportunity for sales in Britain. To conquer the British market, the company Finmar Ltd was founded. The head of the company was Mr. Faulkner and backup support was provided by Geoffrey Boumphrey. Philip Morton Shand, who had been actively involved in CIAM (*Congrès International d'Architecture Moderne*) since its inception, brought Aalto's furniture designs and innovative wood handling skills to wider attention in articles published in the *Architectural Review* and *Architects' Journal*. Several models that later achieved the status of classics, such as the wooden stackable chair (model n° 6119) and an easy chair (model n° 2) were already in production at that time. The manufacturer was *Huonekalu- ja rakennustyötehdas*, which still today manufactures Artek furniture under the name *Huonekalutehdas Korhonen Ltd*. Cooperation did not begin, however, according to expectations, partly due to Aalto's own impracticality and continuous production problems.

In addition to Finmar, other retailers in northern and central Europe were Svenska Artek in Sweden, and Palag A.G, with SIDAM and Wohnbedarf as its retailers, in Switzerland. Particularly Wohnbedarf displayed the designs of Alvar Aalto and Artek in their own shops as well as in interior design exhibitions they themselves designed. Its market area included, in addition to central Europe, also Italy, and Sigfried Giedion's active role was significant in the presentation of Aalto furniture. Giedion was one of the founding members of CIAM, and its first secretary. He gave visibility to Aalto's works in articles, exhibitions and his own books on Modern architecture and design.

Aalto-designed furniture was on display at the Brussels World Expo in 1935, where the Swiss pavilion was furnished with Aalto's furniture. The furniture was presented as models sold by the retailer Wohnbedarf, without strongly emphasising Artek. There could hardly have been a better showcase for the founding of Artek. A lot of business would have been generated, but delivery difficulties by *Huonekalu- ja Rakennustyötehdas* and the lethargic approach to marketing made the export of furniture from Finland difficult. The following world expos, Paris in 1937 and New York in 1939, provided the next visible showcases. The Finnish pavilions were designed by Aalto and the interior design relied mainly on Artek furniture.

New York's Museum of Modern Art held an Aalto solo exhibition in 1935 in which in particular furniture and glass objects designed by him were on display. Simultaneously with the 1939 New York World Expo, an exhibition of Artek furniture toured the USA. For the purpose of retail in the US market, Artek Pascoe Incorporation was founded on the initiative of Clifford Pascoe. The cooperation between Artek and Artek Pascoe ended, however, following economic and design protection disagreements.

Svenska Artek, under the directorship of architect Frölén, was responsible for the Swedish market. Corre-

< Alvar Aalto in the Viipuri Library, 1935.
Photo by Gustaf Welin. ©Alvar Aalto Museum.

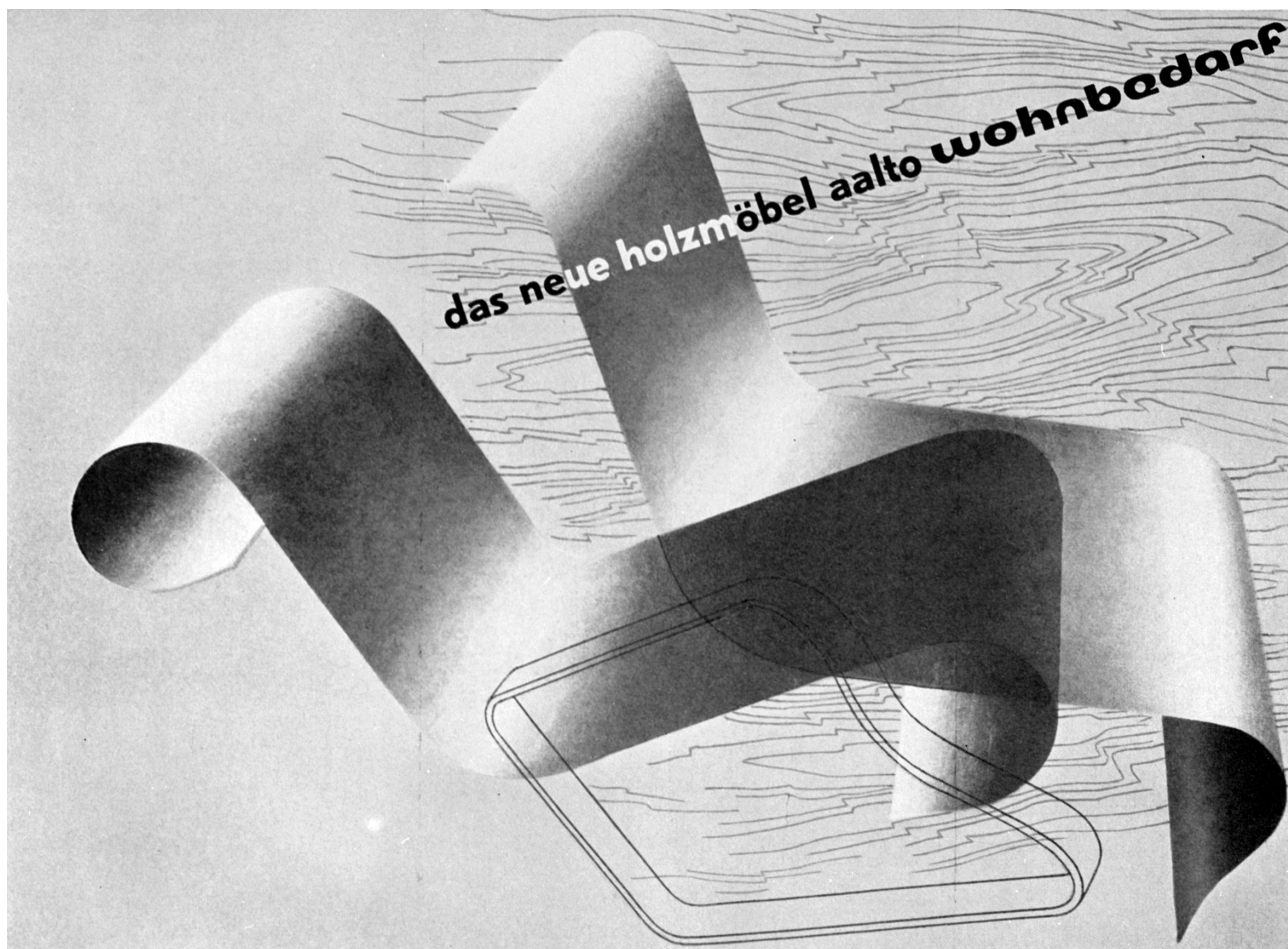


Figure 1. *Wohnbedarf* advertisement, ca. 1935.

spondingly, Metz & Co in Amsterdam was responsible for the Dutch market.

Already before the founding of Artek, Aalto's furniture had been on sale in the interior design and furniture shop Koti-Hemmet founded by architects Elna Kiljander and Marianne Strengell in Helsinki in 1934. The furniture was sold and advertised from the very beginning under the names of Alvar Aalto and Artek. But there were, of course, other designers involved.

Exhibitions and Galerie Artek

The display of modern art in connection with Artek was tied to the personal interests of the central characters in the company, Maire Gullichsen and Nils-Gustaf Hahl. Maire Gullichsen spoke passionately for the display of modern art in Finland and her personal contacts and energy played a central role in this. The central idea was that through the sales of Aalto's furniture it would be possible to maintain an interior design shop and office as well as organise cultural events and exhibitions. Through the *Galerie Artek*, very important exhibitions of contemporary artists were brought to Finland, such as an exhibi-

tion of French painting held at the Kunsthalle Helsinki in 1938 with works by, among others, Léger, Picasso, Utrillo and Braque.

Before opening their own gallery space, exhibitions were usually held in the Artek shop and the exhibition architecture was designed by Aino and Alvar Aalto. In addition to the furniture series, Aalto put on display bent wood compositions based on industrially manufactured furniture parts or furniture production methods, the oldest of which were manufactured already at the turn of the 1920s and 1930s. In 1997 the operations of *Galerie Artek* merged with *Galleria Anhava*, the name under which it continues its operations in Helsinki still today.

Collection

From the very beginning, Artek furniture has been produced by the company Huonekalu- ja Rakennustyötehdas, founded by Otto Korhonen in 1910. The cooperation with Aalto began after 1927 when the Aaltos had moved from Jyväskylä to Turku. Korhonen was interested in the new use of wood in furniture. He developed a process of steam bending when working with plywood and solid

wood parts. The cooperation between Aalto and Korhonen was close, and the first chair models manufactured were metal-legged with a bent plywood seat. In the early years the furniture was also produced by smaller manufacturers, among others Kolho Oy, which produced furniture other than the bent wood models.

One of the early standard furniture models that was sold widely was the stackable chair, that had been awarded a prize at the 1930 Finnish Fair. It was patented by Otto Korhonen but the model was designed by Aalto. 'Standardization' and 'industrial production' were terms employed when exporting abroad Aalto's building fixtures and furniture design.

The commercial success of Aalto-designed furniture proceeded at the same pace as his architecture became more well known. Aino Aalto's role as the designer of the new models was significant, albeit, due to marketing, she has been forgotten behind Alvar Aalto's more recognisable name. Aino also worked as head of Artek's drawing office that operated from the time of the founding of the company. She also had her own models in production, but many of them were buried under the names of

Artek and Alvar Aalto. She emphasised her independent, professional role in Artek by signing the drawings with her surname Marsio-Aalto or initials A.M.-A. She was the soul and driving force of Artek between 1935 and 1948 as the head of the drawing office and during the 1940s as the managing director. The structural solutions for the

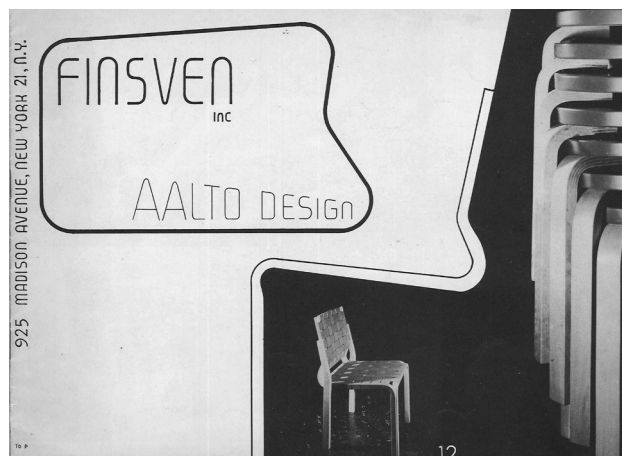


Figure 2. Cover of "New Furniture Incorporated", New York, 1939.

Figure 3. Finsven's Aalto Design Collection for Modern Living, 1955.



ARTEK aalto-furniture
HELSINKI - FABIANINKATU 29, FINLAND



Representatives :

HEDEMORA, SWEDEN Svenska AB Artek	ANTWERPEN Archi-d'Art	CHICAGO, ILL. Baldwin Kingrey Inc.
LONDON Finmar Ltd	LYON, FRANCE Stylclair	DALLAS, TEXAS Ensle O. Oglesby
AMSTERDAM Metz En Co N.V.	NEW YORK, N.Y. Finsven Inc.	SAN FRANCISCO, CAL. Thomas D. Church

In reliable hands all over the world

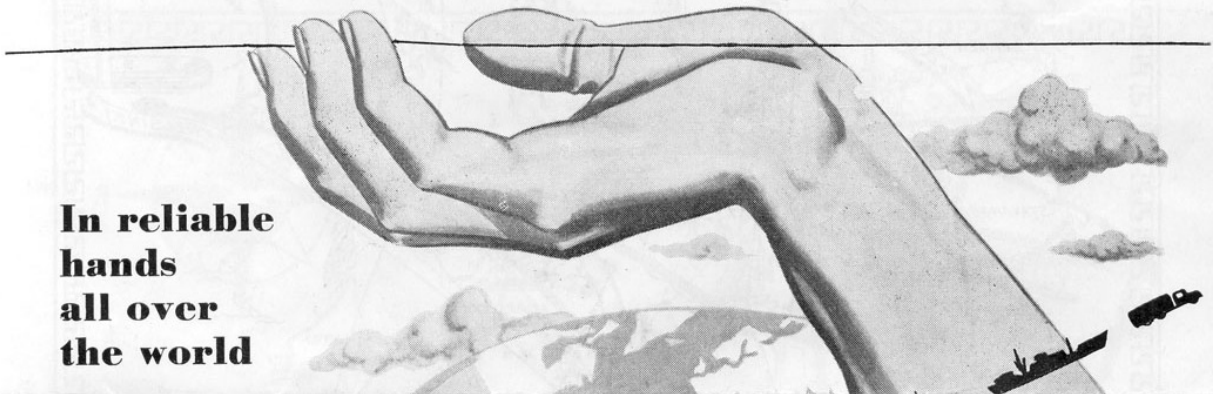


Figure 4. Artek Aalto furniture catalogue, Helsinki.

chairs and tables, in particular the construction of legs, are interesting. The construction and production method of the bent L-leg was patented in 1934. The strength of the leg was increased by plywood strips added to the radially sawn grooves in the bend of the leg. The same construction was also applied to other larger pieces of furniture. The Y-leg is, as the name describes, a Y-shaped slender corner solution; the X-leg was further developed from this.

From the very beginning, Moroccan wool carpets and oriental baskets have been included in the Artek sales collection. These were easily combined with Modern furniture. During the war years, the scarcity of materials made it necessary to look for innovative solutions and

surrogate materials. A shortage of materials and labour led to part of Artek's production being moved to Hedemora in Sweden. An extension was built for Artek's own production in an existing joinery workshop. An exhibition and sales pavilion designed by Aalto was built in 1945 for the 500-year anniversary of the founding of the town of Hedemora.

A Small but Efficient Design Office

Artek's own first shop and drawing office was located in the centre of Helsinki at *Fabianinkatu* 31. During the war years Artek's activities slowed down. There were fewer commissions and the shortage of materials hindered production. The years of material shortages forced

people to be creative. The technical potential existed but in practice the limitations with materials prevented their realisation at that time.

Aino Aalto died in 1949. From Artek's point of view, the loss was great, not to mention Alvar Aalto's personal loss of a spouse and colleague. Interior designer Maija Heikinheimo stepped into Aino Aalto's place as Artek's managing director and head of the drawing office until 1962. She also designed many furniture models of her own for the company. She had worked together with Alvar Aalto already between 1937 and 1939 and again from 1945 onwards. The cooperation produced several models in the 1940s and 1950s, some of which are known as Maija Heikinheimo's own designs, and some of which are variations of Alvar Aalto's own models.

Aino Aalto instigated a practice in Artek whereby new employees studied and redrew the archive drawings. The individual model markings were preserved, but the date on the drawing was changed according to the date when it was redrawn. This practice presents challenges for today's researchers; it is almost impossible to date designs based on the date written on the drawings. All in all, however, Artek's archives are admirably extensive and well-preserved. Products have been presented in the media and trade fairs, the models have been photographed and the many stages of product development have been preserved in the drawings archive.

After Maija Heikinheimo's time in the 1960's it seems that Artek was looking for a new direction. In addition to Aalto's old models, the production of several different designers was added to the sales collection. Interior designer Ben af Schultén became Artek's third artistic director in 1976.

Lamps

Aalto usually used his own lamp models as lighting fixtures for the spaces he designed, but also other suitable lamps were used. The best known are the PH lamps by Danish designer Poul Henningsen that Aalto used in his apartment in Turku and later also in his home on Riihitie in Munkkiniemi, Helsinki. On top of the grand piano in his home on Riihitie is still a paper prototype of the PH table lamp.

The company Taito Oy manufactured metal lamps designed by Aalto before the start of cooperation with the family company Valaistustyö Oy run by Viljo Hirvonen. Hirvonen had worked at Taito Oy before founding his own company, and we can presume that he and Aalto became acquainted via Taito Oy. The cooperation between Aalto and the master metalsmith Hirvonen was very close from 1952 onwards. They developed the final models from prototypes. Very few actual working drawings have

been preserved. Valaistustyö also manufactured metal legs for Aalto's furniture, the so-called Rautatalo door handles and other fixtures. After Valaistustyö terminated their operations in 1975 following the death of Hirvonen, the production moved to the company Valaisinpaja Oy, in Kirkkonummi, the company nowadays known as Cariiti Oy. The production of the Aalto-designed lamp models sold by Artek has been moved elsewhere. After Valaistustyö, door handles were manufactured at the Primo factory at Kellokoski, and on special commission at the Koristevalimo Sievä workshop in Vantaa.

Artek in Alvar Aalto's Architecture

Aalto's architecture and furniture complement each other. Typically, the fixed furniture and details of many of Aalto's projects were designed in Artek's drawing office. Printed textiles were designed not only by Aino, Elissa and Alvar Aalto, but also by many of Artek's long-term designers.

From 1963 onwards, that is, after the death of Maija Heikinheimo, the majority of the interior designs of new buildings from Aalto's office was carried out in the architect's own office. An interior designer was included amongst Aalto's office staff. Aalto had an equally flexible approach to furniture and interior design as he had to his architecture. If the need or technical production methods so required, alternative methods and materials were sought for the production process. Because his design tasks, however, also often included interior design, it became a natural part of the overall design process. This is manifested as a skilled handling of the overall appearance. The furniture complements the architecture through the forms, materials and details.

Artek's main showroom is still located in the centre of Helsinki, though its furniture can be purchased from retailers all around the world. Artek's unique drawing and photo archives are situated in the archives of the Alvar Aalto Museum in Jyväskylä.

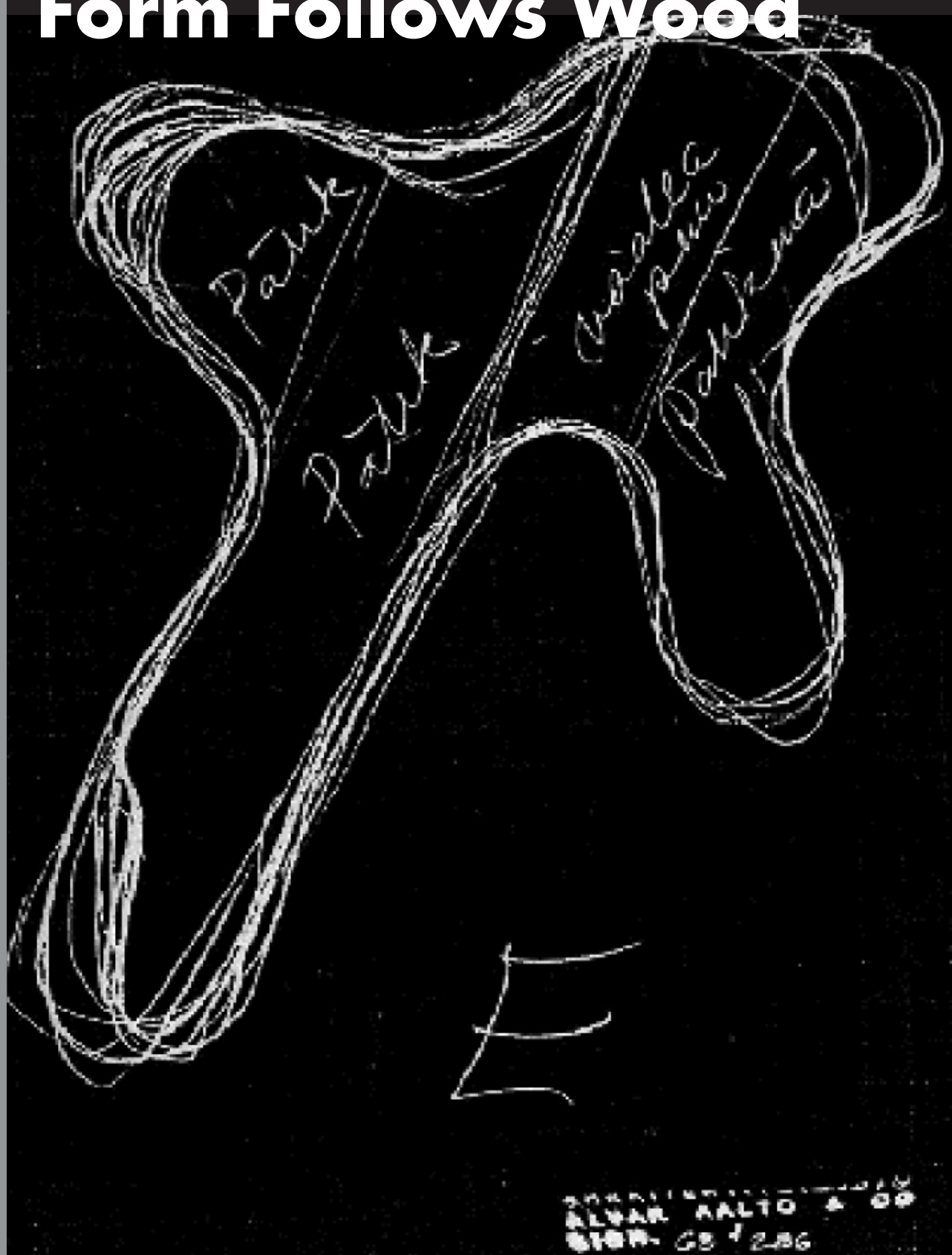
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Mia Hipeli

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Metsäpaviljonski, Form Follows Wood



Nowadays, the emphasis in the design of exposition pavilions is mainly full of pseudo-technical or rhetorical ideas of progress. Nevertheless most of them do not communicate a vision. They show a lack of spatial qualities and continuity with the built environment. In general, there is not a common conservation agenda to adapt or reuse exemplary Modern Pavilions. Some emblematic cases are haunted icons, a consequence of undocumented, incorrect or simply fake reconstruction, whilst others are victims of neglectfulness and degradation. Nevertheless, what can we still rediscover by reviving or reconstructing Modern Movement Exposition pavilions? During the 1930s, pavilions were not only visionary and experimental manifestations of living systems but were also temporary and fast-built showrooms disseminating a cultural or ideological message.

By Cristian Suau

By exploring the work of the Finnish architect Alvar Aalto, we find that all his Modern timber exposition pavilions have been rapidly dismantled. What kind of continuity can we generate by rebuilding Aaltian pavilions? How did this sense of primitiveness become a manifesto for the use of rudimentary within Modern Movement Architecture? In order to respond to these queries, we must search on the idea of Aalto's space-frame as a "[...] fantastic structure of free forms; a building with an inner façade". This pavilion-type becomes an organism of assemblage.

Metsäpaviljonski or the Forest Pavilion, built in Lapua in 1938, was characterised by a sense of impermanency of the framework, fleetingness of the event, and primitiveness in the use of wood. The first condition refers to durability of the structure, the second one implies a transient condition of use, and the third one contains the essential material. Despite it being an ignored masterpiece of Nordic ephemeral architecture, the design cleverly combined Modern and traditional ideas of fabrication. The spatial outcome was both tent and hut. It synthesized a morphological transformation, evolving from a geometric form into a fluctuating organism. The Forest Pavilion was an elementary space for display: a primitive frame wrapped by turbulent and fibrous textile patches.

Exposition Pavilions as structures are inherently transitory. This establishes a double dialogue: from nature to architecture and from architecture to nature. Thus the Forest Pavilion emerges as a playful manifesto of primitiveness. Following a Semperian viewpoint, the Forest Pavilion re-bridges the ideas of Modernism rooted in vernacular living rather than avant-garde trends. It refers to the notion of the Finnish tent, *kota*, a temporary nomadic dwelling based on the logic of

'camouflage', where its skin constitutes the bark or shell. In the Forest Pavilion form follows wood.

Wood as Symphony of Lines

"The first fundamental feature of Karelian architecture that meets the eye is its use of a single building material. Few comparable examples can be found in Europe. It is forest architecture pure and simple, with wood dominating almost one hundred percent both as a building material and jointing. From the roof with its strong log structure, to the moving parts of the building, we find timber, which is generally left naked, without the effect of immateriality given by coloring. Timber is mostly used as close to possible in its natural size, according to its own scale. A tumbledown Karelian village is externally somehow related to Greek ruins, where the unity of material is also a salient feature, though in them wood is replaced by marble all the way up to the entablature".

Alvar Aalto,

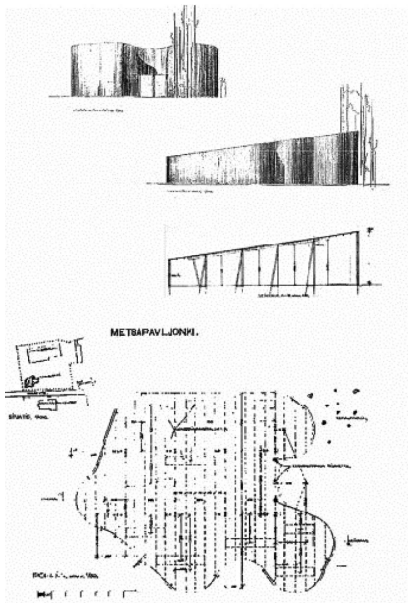
Karjalan Rakennustaide, Uusi Suomi, 1941.¹

If we analyse the initial sketches of the Finnish Pavilion at the Universal Exposition in Paris (1937), we can obtain a rectangular proto-form containing many weaving lines diagonally allocated. These were overlapped whirl-pooling figures: fluctuating surfaces wrapping the main exhibition hall. The application of woven lines confronting straight ones was part of the tectonics trail initiated with the ceiling in the Viipuri Library's lecture room (1931). In *Metsäpaviljonski*, these inner waving traces finally merge as released lines, which delimit its shape.

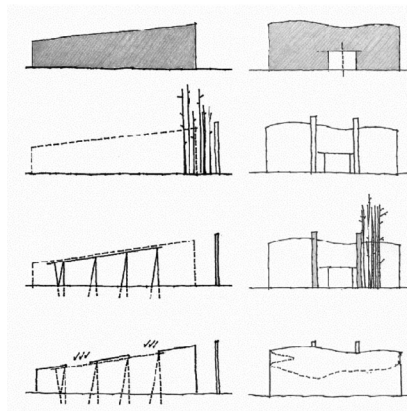
Anonymous and underestimated by the History of Modern Architecture, *Metsäpaviljonski*—a primitive and rural pavilion—appears as synthetic space of the Aaltian thoughts and, at the same time, completes its tectonics meaning rooted in the sense of "symphonic structure".

This implies a reflection on matter and time. In terms of matter, the Aaltian space is metaphorically frozen music, where lines in motion make matter. These interweave each other and thus generate a sequence of fluctuating tissues that emulate forest. In terms of time, the pavilion

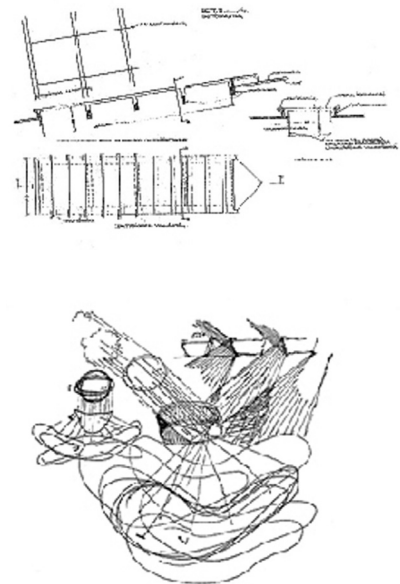
<. Detail of roof frame in Lapua Forest Pavilion. Source: Cristian Suau.



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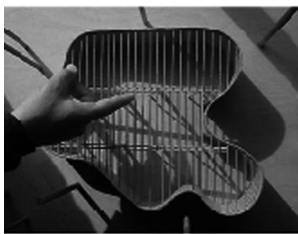
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Figure 1. Original drawings of Lapua Pavilion.
Source: Alvar Aalto Archive (AAA).

Figure 2. Studies of place, frame and light in Lapua Pavilion.
Source: Cristian Suau.

Figure 3. *Metsäpaviljonki* and Viipuri Library natural light devices.

Figure 4. Original photograph of Lapua Pavilion. Source: AAA.

Figure 5. Model making of *Metsäpaviljonki* at scale 1:25.
Source: Cristian Suau.

signifies an ephemeral space, an instant-space.

During the construction of the Finish Pavilion at the New York World Fair in 1939, Aalto affirmed, "an exhibition is a momentary impression, a snapshot that can only succeed if it holds a profound and consistent analysis of Time and the Spirit".² Both pavilion and the act for exhibiting recreate a cultural vision between built and natural environments. In this sense, wood emerges as appropriate substance of temporality due to its lightness and textile condition.

About Aalto's architectural language of lines, Colin St. John Wilson affirms, "this is reflected as fundamental characteristic of the 'structure' of his creative action. This can be understood by two forms of drawing, an ideogram of two lines based on a continuous line confronting an undulating one. However, these two forms can only be

imagined lines of an electroencephalogram, a footprint of cerebral processes in the sense that appear to be always in the argument of the Aaltian building as a complementary between the rigorous analysis and the turbulent emergence of fantasy".³

The fascination of lines by Aalto is the understanding of movements and natural processes. For instance, the technological research on folding timber plies. In 1926, Aalto expressed that "[wood] should be curved, also ex-

perienced, like an unpredictable line, which runs through unknown dimensions to the mathematicians and, which is the embodiment of everything that form a contrast in the Modern world between the mechanical Brutalism and beauty of life".⁴

The lines evoke a topographic space of discontinuities. Nevertheless, how did the Aaltian space adapt to the surrounding? Central Finland is a discontinuous and fragmented geography. The Agricultural Fair of Lapua took place in June 1938. This event was a modest lab to test the primitive use of wood and its tectonics.

Metsäpaviljonski was an elementary space for exhibit. It displayed the products of local timber companies. Jarl Jaatinen, based on Aalto's guidelines, executed the design.⁵

The Tectonics of the Textile

Only four original drawing sheets exist in the Alvar Aalto Foundation. They describe both spatial and technical aspects of *Metsäpaviljonski*. Two sheets refer to the general plan and location and elevations and the others contain the constructive sections of roof detail, skylight and wall. This rural pavilion was situated nearby a main road and erected within a woody lot of thin conifers.

The Lapua Pavilion evokes the same poetical sense of wood captured by the French poet Francis Ponge in his masterpiece entitled "Notebooks of a Forest of Pine Trees" (1940). The forest (read also *Metsäpaviljonski*) appears like a "piece of nature"; "a relative haven"; "a place sanatorium; and (...) a hall of music". Ponge adds, "Everything is perfectly set up, without excesses, to leave the man in solitude. That vegetation and animation are disclosed to the heights, nothing to distract the view. Everything is dormant, through the multiplication of similar columns".⁶

The *Metsäpaviljonski* main frame consisted of a repetitive system of tripod-columns of 5" in diameter. The structural grid consisted of three modular frameworks of 3.50x4.50 m each. In his book *Alvar Aalto* (1995), Richard Weston erroneously indicates that its outer dimensions were 18.00x14.50 m, with a variable roof height from 4.75 m to 2.75 m. It will be appropriate clarify in the original drawings their exact dimensions.

The Aaltian standardization is made by unity within variety of elements of assembly. It is nonlinear geometry. Therefore, we obtain a combined system of concave and convex curvatures, without orthogonal corners. The analysis of the original drawings indicates new vestiges: the layout of this pavilion is defined by non-Cartesian geometry, a space defined by the logic of turbulences: a constellation of whirlpools.

In terms of skin, Aalto manufactures a sort of mirror-wallpaper, a façade that is mimetic with the exterior. The

principal threshold consisted of two trunks. The visitor finds an opening that is driven by concave walls towards an access. Crossing this position, we find an enclosed space. It is fluctuating, rough and with distorted depths. The wall establishes the limits. The wall is defined by a modular panel system based on studs of 2"x 4". The roof beams are logs (200 cm radius each). The outer cladding is made of overlapped vertical planks.

According to Göran Schildt, he argues this constructive detail was extracted from the undulating ceiling of the Viipuri Library's lecture room. This assertion is insufficient. By confronting composition, textures and geometries we find a sort of bewilderment. The ceiling of the lecture room is a homogeneous and smooth surface. It is a plane, which floats horizontally and follows the foliage of Tarkkeli Park. Nevertheless, the main space of *Metsäpaviljonski* intertwines curved planes of diverse heights.

The surfaces are heterogeneous and rough. The planes roll and wrap vertically the whole shape. Therefore, they are the result of endogenous and exogenous twirling, where the roof is a perforated and tilted plane. It defines a celestial refuge. Its undulating limit constitutes the effect of an alchemical process of transformation of matter, from light to wood. What is the Forest pavilion? Is it the attempt to re-merge the missing part of the Viipuri library? Certainly Aalto applies the same principles of reflectivity of sound in acoustics into natural light.

Forest Frame of *Metsäpaviljonski*

In order to understand the main structural criterion of *Metsäpaviljonski* it is necessary to study the cross section. The main structural frame is a timber chassis or core, which consists of eight tripod-columns within a grid. The columns are anchored on the ground. Over the core hangs a sloping roof, supported by timber beams every 700 mm. The wall surrounds the exhibit space. The roof frame subtly rests on it. Each modular panel has 600 mm of width. The roof is a suspended plane; it levitates and shades the main space. The skylights perform like musical figures on a pentagram. Every opening transforms the natural light into a symphonic canopy.

Apparently the system of external siding is the result of overlapped planks that resemble a variant of similar sheathing systems used in the Finnish Pavilion in Paris and Villa Mairea. It creates the sensation of a dense forest. Inwards we appreciate the same sensation.

The natural light does not enter through eleven skylights of 2500x500 mm, wrongly counted by G. Schildt, but light-catchers with variable lengths. Aalto will implement a similar lighting system at the Finnish Pavilion in New York (1939). In summertime, the roof is the only contact with the sun. Like in Viipuri Library's skylights, light is



Figure 6. Photography of Lapua Pavilion, 1937.
Source: AAA.

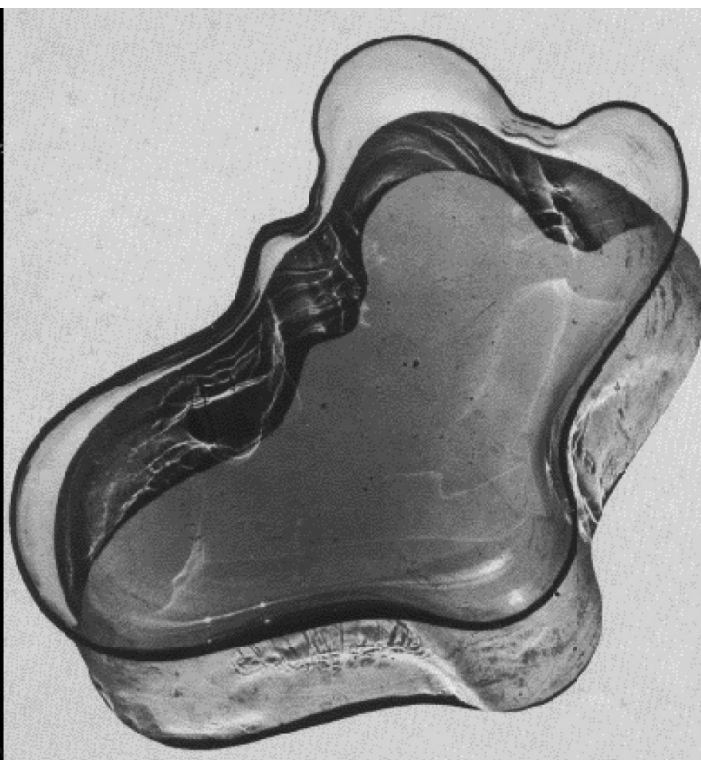
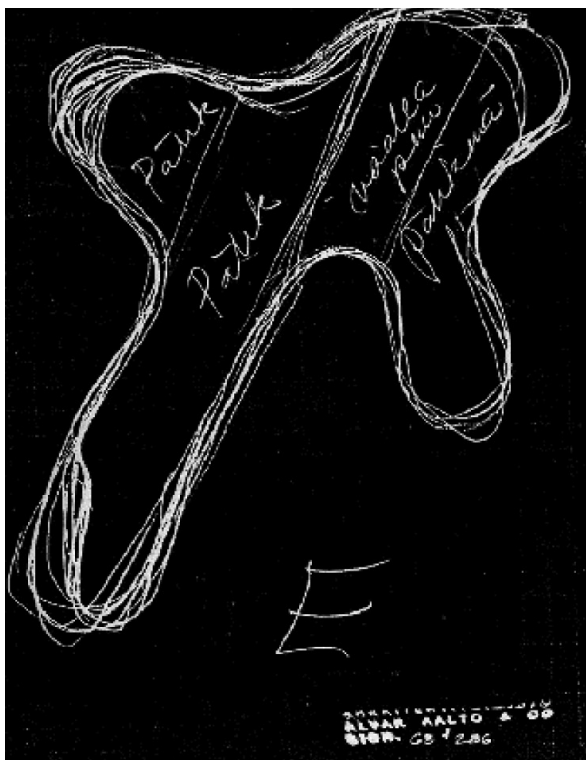
Figure 7. Comparative illustrations of preliminary sketch of timber handle at the Finnish Pavilion in Paris, 1937; and detail of vase designed by Aino and Alvar Aalto for the Savoy Restaurant in 1937. Source: AAA.

Figure 8. Detail of roof frame in Lapua Forest Pavilion. Source: Cristian Suau

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smoothly canalized through the openings. Light begins to draw woven surfaces beneath the roof. The sun does not represent a cosmic force but a caloric one. The sun is tactile warmth.

In term of landscape integration is essential the comparison of *Metsäpaviljonski* and *L'Annunziata* by Fra Angelico. The boundaries of domestic and rural worlds are treated in a non-hierarchical way. It is a picturesque scene where the green field and the temple are placed at the same level. This generic background contains a winter scene. The building implies sanctuary surrounded by a Naturalist territory.

Form Follows Matter

In *Metsäpaviljonski*, the symphony of free forms is poetically built by turbulences of light and sound. The textile surface, initially sole and internal, became a textile shape, an amorphous body. The tectonics meaning is characterized by the following factors: non-uniform composition; fluctuating plan (variable layout); and wood as textile skin and tectonics frame.

Aalto stated the desire to synthesize irreconcilable terms or dialectic structures: vernacular versus Modern; natural versus artificial; or intuitive versus rational. He always repeats and scales geometrical patterns. For instance, if we observe the preliminary plan of the Finnish Pavilion in Paris, the initial form followed the logic of a liquid shape. Inside appears a sort of inhabited formations articulating abstract topographies. In the Lapua Pavilion, the light lines have shaped the inner space liquid with an edge built by concave and convex folds.

Finale

How should we reinterpret the Aaltian tectonics trail? In the essay called "The Trout and the Stream", Alvar Aalto reflects on restless organisms led by turbulences. A similar approach can be found in the water flow studies of Leonardo da Vinci. Aalto always traces a spatial layout of spa within spa within spa; a process of fractal bifurcations where larger vortexes splits in smaller. This "Aaltian organic whole" is essentially a space in motion: a model of vortexes within vortexes *ad-infinitum*. Its turbulent lines enter into fractional spaces that remain trapped between planes and solids. Is this order of turbulences a new spatial continuity?

This order consists of continuous lines that chaotically define a vacuum liquefied. The space should be represented like liquid in motion between two cylinders. The external cylinder remains stationary while the internal rotates. The movements generate a flow in which the different parts of the liquid are relocated through rotations. In these bifurcations appear inner fluids that vary at dif-

ferent frequencies. In order to increase their rotation, the regular movement disintegrates in random fluctuations. These alterations occur due to all components of the movement are interconnected.

The *Metsäpaviljonski* is a thermal home. "(It) is constructed as a hangar, a warehouse, or a shed (hall). Senile masts touched on verdant conical tress... Infinite columns argue the absence of roof".⁷ The Forest Pavilion is an assembled organism. Its standardized parts and materials have the qualities that enable the largest possible number of combinations. The Aaltian pavilion uses both biological and topological analogies that understand the architectural nature as a set of cellular processes towards a textile outcome.

Notes

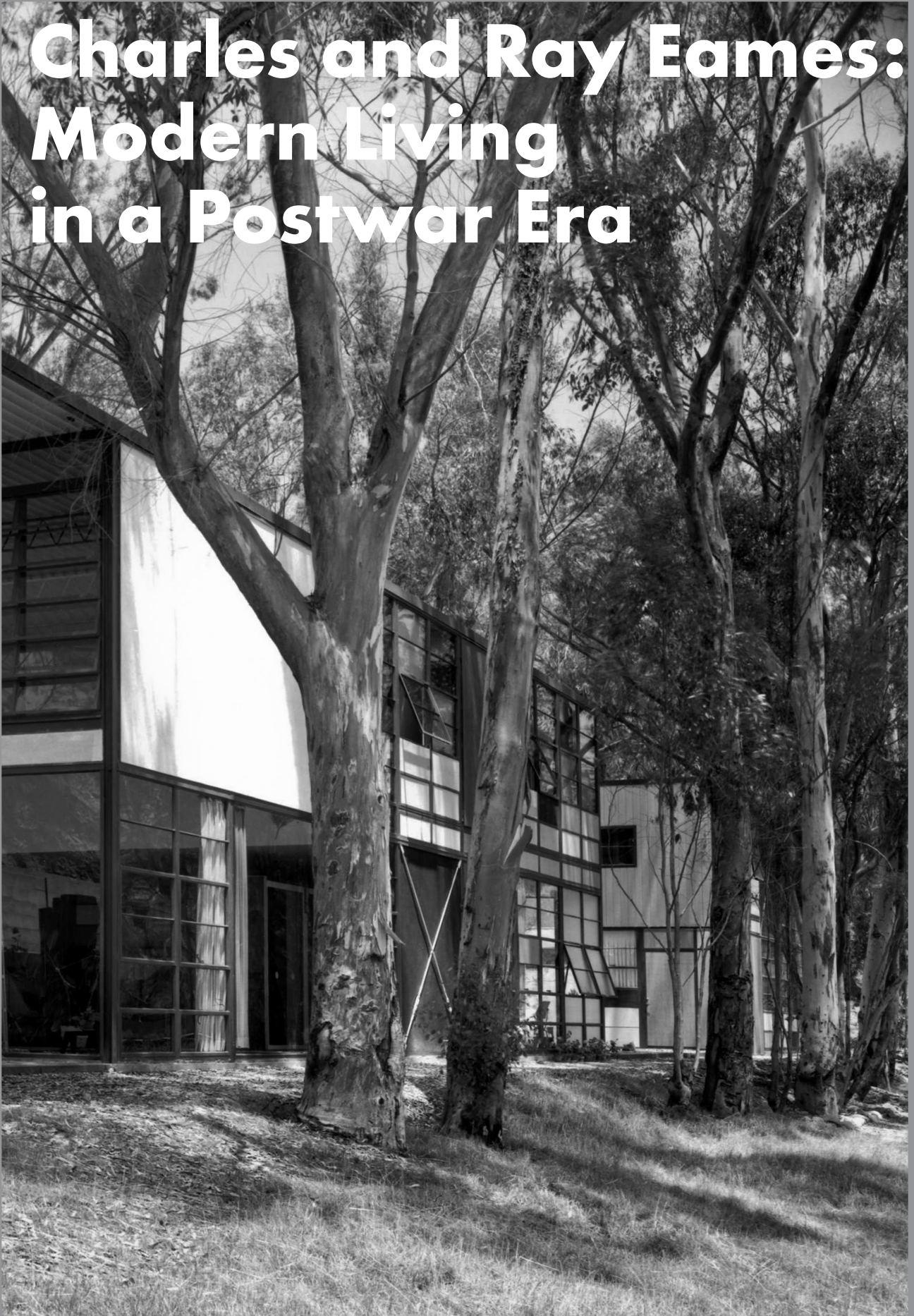
1. Schildt, G., *Alvar Aalto in His Own Words*, Otava Publishing Co., Helsinki, 1997, 117-118. The original text titles *Uusi Suomi (The Karelian Architecture)*, written by Aalto, A. (November 2, 1941), Alvar Aalto Archives, no 4127.
2. Smeds, F., *Architecture and Images in the Finland Pavilions*, Tampere-Paino Oy, Tampere, 1993, 54.
3. Colin St. J., *Alvar Aalto and the State of Modernism*, Architectural Reflexions: Studies in the Philosophy and Practice of Architecture, Butterworth Architecture, London, 1992, 91.
4. Text extracted from an unpublished manuscript by Alvar Aalto. See book *The Decisive Years* by Göran Schildt, 12.
5. See Alvar Aalto Archives (AAA). DY, 280; figure 312.
6. Ponge, F., *Cuadernos del Bosque de Pinos*, Tusquets ediciones, Barcelona, 1976, 27 and 98. Ponge insisted in using a dictionary during his regular walks in the forest. He poetically referred to two notions: hangar or enclosed storage and forest as forbidden land.
7. Ibid, 99.

Cristian Suau

Holds a Ph.D. in Architecture and Master in Urban Design (ETSAB). He has an international teaching and advanced postdoctoral research experience on Architectural Design; Theory of Architecture and Urban Design in Europe and also Latin America. He also has a practice experience in housing, urban design projects and consultancies overseas. He was senior architect/project leader in the Office for Metropolitan Architecture (OMA) in Rotterdam. In addition, he has obtained several awards in design entry competitions such as EUROPAN and others. His current research mainly covers the following fields: Architecture, Cities and Polyvalence; Socio-cultural Analysis and Theory of Modern/Contemporary Architecture; and Sustainable Architecture. He has a solid foundation of design excellence; conceptualization; innovative and cross-disciplinary vision; and leadership in effective international teamwork environments. Since mid 2007 he is a lecturer in Architecture at the Welsh School of Architecture (WSA), UK and also lead an NGO called RECICLARQ in Barcelona: www.reciclarq.org

Charles and Ray Eames: Modern Living in a Postwar Era

48



Anything seemed possible within the spirit of the postwar era. It is often noted that Charles and Ray Eames advocated the principles of Modernism through the adaptation of innovation from wartime technology. Undoubtedly, Charles and Ray Eames were pioneers who gave shape to America's 20th century through the pursuit of industrialization, including their influence in the process of prefabricated mass production and residential construction. Their lives and work are significant not only due to their innovative furniture but also because of the internationalization and global expansion of American culture through their contributions to architecture, film, and industrial and graphic design.

By Kyle Normandin

Embracing the Spirit of the Postwar Era

"We don't make art; we solve problems" was a favorite motto of Charles Eames [figure 1].¹ In a rare era of common objectives, the federal government and the country's top businesses partnered with the Eameses to lead the way in modernizing postwar America. Charles and Ray Eames embraced this era with visionary concepts of technological innovation that set out to prescribe a pioneering aesthetic for Modern living. By recognizing problems and coming up with solutions through design and mass production, they demonstrated that good design could be achieved on a mass scale. Ultimately, their furniture shaped our visions of Modern interiors and provided a new idiom for living in the postwar era. Charles and Ray Eames represented the vanguard of social change through creative design innovations that overlapped with emerging interests of the 20th century, and were part of an era of rebuilding after World War II.

Molded Plywood Innovation

Charles Eames trained as an architect and, together with Eero Saarinen, taught at the Cranbrook Academy of Art outside Detroit from 1939–1941. Both architects had the idea of creating a minimal piece of furniture—primarily a cushion chair that would be constructed using a hard substance—which would also be comfortable. More importantly, the simple constructed form would be mass produced, a consideration that would have a positive influence on its design.² Both Eames and Saarinen collaborated on various furniture designs to address the challenge of bringing a final design into mass production. The Academy's adaptive design approach and its creed of "better living through better design"³ influenced their sensibilities and informed their shared agenda of design concepts.⁴

In 1940, the Museum of Modern Art in New York announced a competition for young designers in which the winning entries would be put into production by manufac-

turers. Eames and Saarinen entered designs for several pieces of furniture and won first prize for living room furniture in what came to be known as the "Organic Design Competition." At that time, they worked with the manufacturers Heywood-Wakefield and Haskelite to make chair shells out of a single piece of plywood, but because the technology did not exist to mass-produce the designs, very few chairs were actually made.⁵

During this time, Charles Eames and Ray Kaiser met at the Cranbrook Academy. They married in 1941 and moved from Detroit to Los Angeles. Committed to overcoming the challenges of developing new methods to mass-produce compound curved, shaped, molded-plywood chairs, the Eameses set out to create and further develop their furniture designs by researching new manufacturing and fabrication techniques that drew on prior developments with plywood chair manufacturing at Cranbrook. Eventually, the Eames's molded-plywood chair represented their first attempt to create a single shell that would be comfortable without padding and could be quickly mass produced.

At the beginning of World War II, Charles and Ray proposed to the U.S. Navy the creation of a lightweight, inexpensive, molded-plywood leg splint that would be much lighter and more practical than the metal ones already in use.⁶ They received a contract based on a molded-plywood design for which a patent was issued on May 28, 1941 [figure 2]. The design sketch shows a sculpted and functional device that is modular in form. With access to additional technological developments from the U.S. government, including newly developed water-resistant glues, the Eameses were able to yield and shape stronger plywood to produce the curved leg splints. Access to military technology and manufacturing facilities: the office designed the machines, set up and ran their own manufacturing facilities which allowed the designers to perfect their technique for molding plywood, on which they had been working for several years. The three-dimensional, ergonomic form incorporated numer-

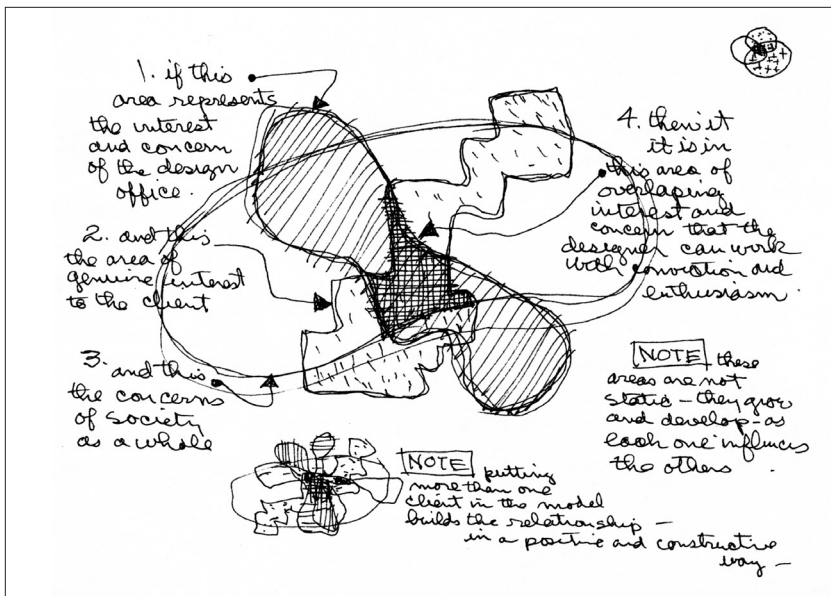


Figure 1. Diagram by **Charles Eames**, displayed in the 1969 Exhibition, *Qu'est-ce Que Le Design?* (What is Design?) at the *Musée des Arts Décoratifs* in Paris, France. Image is: Courtesy and © 2012 Eames Office.

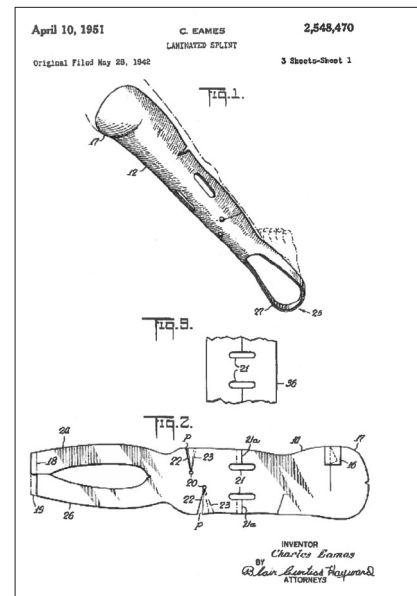


Figure 2. Molded plywood leg splint patent sketch from April 10, 1951, originally filed in May 1942, United States Patent n°. 2548470, **Charles and Ray Eames**, manufactured by Evans Products, Molded Plywood Division. Image courtesy Library of Congress, Prints and Photographs Division, Work of Charles and Ray Eames. © 2012 Eames Office.

ous curved holes in the plywood that allowed for surface tension release in slotted curves and simultaneously allowed for practical locations to wrap bandages around and through the wood splints. The Eameses worked to mass produce the leg splints. Ultimately this experience in mass production provided the opportunity to design new shapes with new materials and technologies on a mass scale. Through this process, the Eameses gained practical insight into design implementation. Coupled with production of approximately 5,000 wood splints, this became their first experience in mass production and would later provide the base of knowledge needed to manufacture a line of plywood furniture designs including the iconic Eames Lounge Chair.

Furniture and Materiality

The details are not the details, they make the product, just as details make the architecture—the gauge of the wire, the selection of the wood, the finish of the castings—connections, the connections, the connections.”

Charles Eames

As Charles and Ray Eames discovered new techniques and innovations for gluing plywood, the expertise gained from war production continued to extend toward their interest in the development of furniture. Through a period of experimentation with a range of materials during the war, they were able to design a number of plywood experimental chairs that included a variety of concepts in

different formations. Starting in 1945, molded plywood shapes were formed in several configurations to include different types of back supports, seats, and various types of legs and spines. These early plywood chairs served as prototypes that could be experimented upon and were created at full scale not only in wood but also in metal, so that components of each chair could be compared to address technical and aesthetic issues. Solving technical



Figure 3. Molded plywood lounge chair prototype, *Architectural Design*, September 1966. Image courtesy and © 2012 Eames Office.

problems was paramount in resolving aesthetic issues, as newly shaped material components often relied on engineered connections. Various types of glues and rubber discs were used in these experiments to optimize connections between individual chair components. The Eameses not only developed prototype plywood chairs but also tables and lounge chairs. The lounge chair studies were carried out in an effort to develop a comfortable reclining chair [figure 3]. During this time, the Eameses also designed a line of children's furniture and molded plywood animals. The furniture was constructed from laminated birch and was manufactured in various colors, with an eventual run of 50,000 chairs and stools mass-produced by the Molded Plywood Division of Evans Products. In June 1946, Evans Products granted the furniture company Herman Miller Inc. exclusive rights to market and distribute the plywood furniture.⁸

As the Eameses continued experimentation with materials discovered by American manufacturers during wartime production, their interest in materiality extended also to plastics with fiberglass reinforcements for their new furniture designs. The first chair to be mass produced in plastic was Charles Eames' shell chair, which had a single molded unit for the seat and back support. The successful experimentation using fiberglass-reinforced polyester resin to form this chair is perhaps one of the most epic examples of how development of new materials and techniques had an impact on design during the postwar era. The shell chair was designed to be light, durable, and easy to store, and together with the Eames plywood armchair and ottoman, it is among the classics of 20th-century chair design. All of the leading Eames furniture designs, including the plastic shell chairs on metal legs, all-wire chairs, stacking chairs in plastic, and the

Figure 4. Exterior view of the Eames House from the meadow toward the living space, photographed in 1950. Image © The J. Paul Getty Trust. Used with permission. Julius Shulman Photography Archive, Research Library at the Getty Research Institute. Shulman Photography Archive, Research Library at the Getty Research Institute.



bent-plywood lounge chair and ottoman were manufactured by Herman Miller. The Eameses did not just design furniture but engaged implementation of full-scale mass production of tables, storage units, and stacking chairs, all which were engineered artwork.

The Eames House

The Eames House, also known as Case Study House n° 8, consists of two structures—a living space and a working space—separated by an open courtyard. The house and studio, which are set in a grove of eucalyptus trees, are built into the base of a hill supported by a concrete retaining wall and enjoy expansive views across a meadow to the Pacific Ocean [figure 4]. Built by Charles and Ray Eames in 1949, the house was an experiment in the use of prefabricated materials and mass-produced, off-the-shelf products to rapidly construct a residential structure. Once underway, construction started in January 1949 and the Eameses moved in during December 1949. A brief period of construction and the use of prefabricated industrial materials in a residential context was unique at the time. The overall shape and height of the structure, the enclosed maximum amount of volume, and personalized use of interior space are equally exceptional.

The Eames House is one of a group of five houses located on a five acre parcel in Pacific Palisades, California, designed under the influential Case Study Program initiated by John Entenza, editor of *Arts and Architecture* magazine, to promote the development of new models of affordable, mass-producible housing utilizing the technology of the Modern age. The site, house, and studio were inhabited by Charles and Ray Eames up through their deaths in 1978 and 1988 respectively, and the ensemble, with its contents, tells a remarkable story not only about the design and architecture of this period but also about the role the Eameses played as innovators of Californian Modernism within an international context.

Today, the Eames House provides an intimate view and lens into the lives of its occupants, affording a new understanding of the human side of Modernism. The interior contents of the house, which accumulated over time, tell many stories of the evolution of experimentation beginning with the furniture Charles and Ray designed throughout the 1940s and 1950s, spanning the years following their arrival in California [figure 5]. As pioneers and designers of furniture for Modern living, together they developed a vast body of work that shaped the future and the way we live today.

Charles's daughter, Lucia Eames [Demetrios], uses her personal experience to describe the house's interior: "When one wakes up in the morning, there is the most wonderful shadow play as light filters through the Euca-



Figure 5. Interior view of the living space with **Charles and Ray Eames**, photographed in 1950. Image © The J. Paul Getty Trust. Used with permission. Julius Shulman Photography Archive, Research Library at the Getty Research Institute.

lyptus leaves onto the screens and walls, One takes a delighted look at the beautiful pattern of the living space, as seen from above, and then a wonderful spin down the spiral staircase and into the sudden openness of the living space before settling into the kitchen for breakfast." Furthermore, the living space served as a set where objects could be placed and taken away. The way in which Ray and Charles Eames perceived the unique volume of the living space included placement of collected objects from their many travels, and furniture from numerous exhibitions and films, all of which were part of a constant changing collage in this extraordinary setting.

The Eames House Conservation Project

In September 2011, the contents of the Eames House living space which included 1,869 items, was temporarily relocated to the Los Angeles County Museum of Art (LACMA) for exhibition until June 2012. The transfer of the items provided an opportunity to address various issues relating to the general wear and tear on the house since

its construction in 1949. Currently, the Eames Foundation is developing a program of conservation and repair with a view to addressing issues relating to the building envelope, interior flooring, steel-framed windows, and other interior fabric issues. In addition, the Eames Foundation seeks to develop a long-range strategy for the ongoing conservation, maintenance, and display of the house; this strategy will include investigative and analytical work in order to understand the current condition of the house; its interior living space collection, furniture, and artwork; and its setting; and identification of optimal condition requirements that will guide development of strategies that meet long-term conservation needs. The Eames Foundation has engaged project architect Escher GuneWardena Architecture (EGA) to oversee the current program of work at the house. The Getty Conservation Institute (GCI) is working with EGA and the Eames Foundation to assist in the development of the conservation management plan for the house.

Currently, the GCI is providing the necessary investigation and scientific analysis to understand the environmental and physical conditions affecting the site, the house, and its contents. Environmental monitoring is currently in place and will be carried out over the course of the next year. This will provide a better understanding of the context in which the building performs so that appropriate conservation approaches and techniques for the historic fabric can be considered and determined. The current environmental monitoring program will lead to the design of a climate control system that will protect Charles and Ray Eames' interior living space collection and artwork for the life of the house.

The Eames's influence in the use of mass production in defining the aesthetic of the postwar era, as evidenced through furniture and residential design, as well as industrial and graphic design and film, undoubtedly demonstrates that they were ground-breaking pioneers who gave shape to American culture in the 20th century. Through their design innovation, iterative process, and utilization of mass production, their work is prolific not only due to their success in design process and approaches but also because of the internationalization and global expansion of American culture through a prescribed Modern way of living.

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2. Stern, Bill "War and Peace: Unexpected Dividends", Kaplan, Wendy, ed. *Living in a Modern Way: California Design, 1930–1965*,

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5. Ibid., 71.
6. Quoted in Caplan, Ralph, *Connections: The Work of Charles and Ray Eames*, Frederick S. Wight Art Gallery, University of California, Los Angeles, December 7, 1976–February 6, 1977 (Los Angeles: UCLA Art Council, 1976), 15.
7. Massey, Anne, *Interior Design of the 20th Century*, New York, Thames and Hudson, 1990, 145–62.
8. Quotation in Hasan-Uddin Khan. *International Style: Modernist Architecture from 1925 to 1965*, Cologne. Taschen, 1998, 38.

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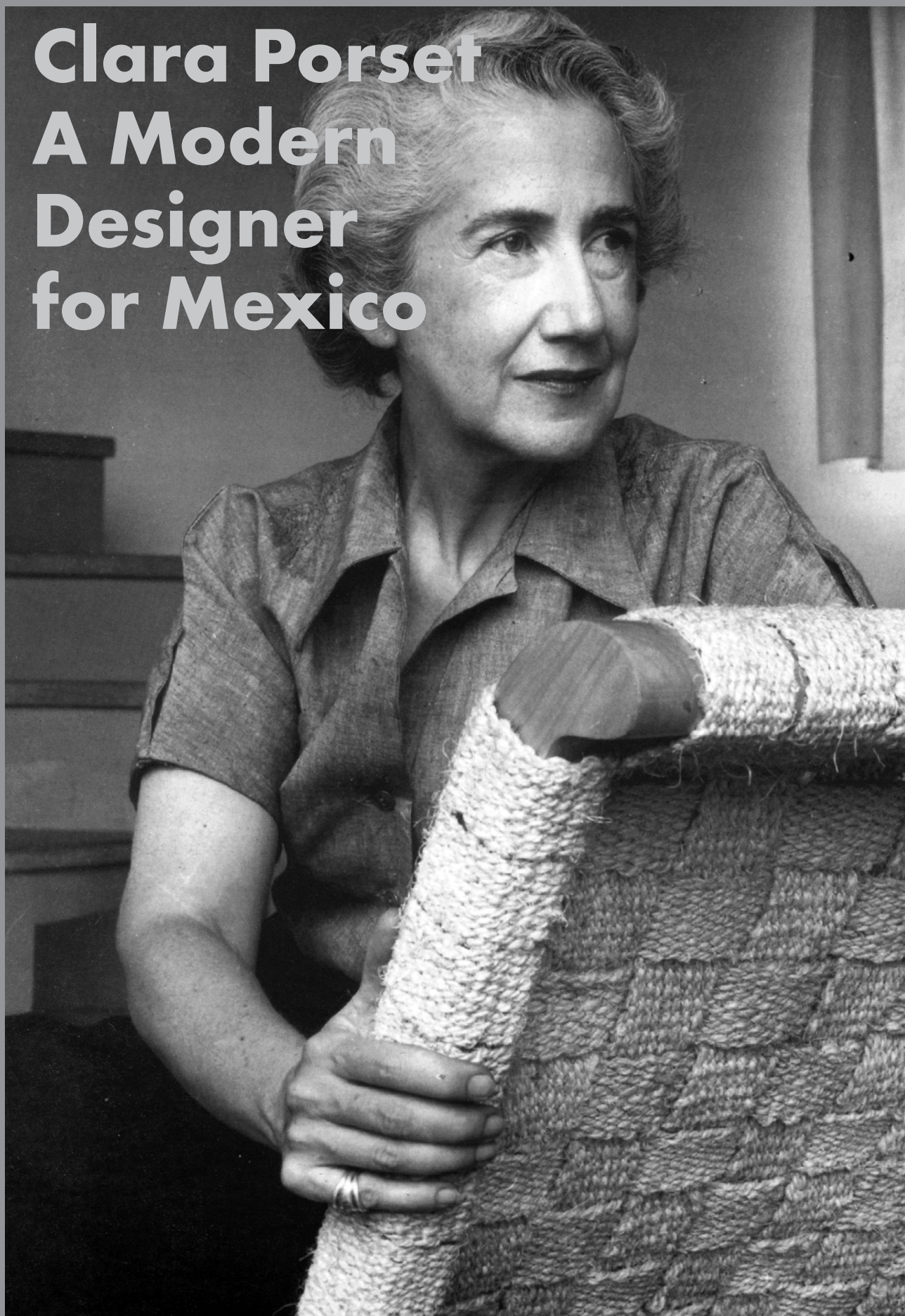
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Clara Porset A Modern Designer for Mexico



The idea of design came about, following various approaches, at the end of the 1920s in the last century. The design and production of furniture and household appliances, as part of the work of a specialist, is an experience that evolved from the Bauhaus and wanted “to serve in the development of present day housing, from the simplest household appliance to the finished dwelling”¹, as Walter Gropius explained in 1927 in the *Principles of Bauhaus Production*. Other architects like Hugo Haring, in 1927, talked about “objects that are on the one hand works of art, and on the other are intended for use”², while 24 architects headed by Le Corbusier founded the CIAM in 1928 and sated “the need for a new conception of architecture that satisfies the spiritual, intellectual and material demands of present day life”³. This was the atmosphere laid out by the avant-garde movements in Europe when Clara Porset arrived in Paris to pursue her graduate studies in art and architecture.

By Louise Noelle

Clara María del Carmen Magdalena Porset y Dumas was born in Matanzas, Cuba, on May 25, 1895.⁴ She had a privileged childhood that disembodyed in her attending Manhattanville Academy high school in New York from 1914 to 1918. Her natural restlessness and interest in art and design led her, in 1925, to study at Columbia’s School of Fine Arts in New York. She then decided to further her studies in France, between 1928 and 1931, where she attended both *La Sorbonne*, for a course in aesthetic, and the *École des Beaux Arts*, for architecture and art history classes. At this time she pursued her interest in furniture design in the atelier of Henri Rapin⁵ where she took on lessons and practical experience.

It is interesting to highlight the date of her arrival to Paris: 1928. It was in that precise year when Mario Pani started his architectural studies in the *École des Beaux Arts*, a circumstance that provided them with a common architectural background for their upcoming professional rapport. Also, it must be noted that it was the year of the CIAM Declaration at La Sarraz, where the controversial Le Corbusier was the leader of an important group of members of the above mentioned organization, making the French city an important place for new and challenging outcomes.

After her European journey, Porset returned to Cuba and started her professional work as an interior and furniture designer for homes and diverse establishments. At the same time she participated in the foundation of the Cuban Institute of Architects and started teaching at the *Escuela Técnica* for women.

But there was still one experience lacking in her quest

for knowledge in the field of what we now call Industrial Design: the Bauhaus. She got in contact with Walter Gropius to study under his guidance, but unfortunately it was 1933, the year that the school was dissolved.⁶ Luckily he recommended her to look up Josef Albers who had moved to Black Mountain College, in North Carolina, to teach his famous *vorkurs*. When Porset decided to leave La Havana due to her opposition to the dictator Guillermo Machado, she signed up at Black Mountain College to attend the courses and started as a result a long lasting friendship with Josef Albers and his wife Anni. No doubt she benefited from the rich artistic life of the college. It must be added that her acquaintance of Hannes Meyer—Dean of the Bauhaus and founding member of CIAM⁷—as she sought exile in Mexico in 1936, closed the circle of her learning and allowed for yet another important friendship.

Upon her arrival to Mexico, her inclination towards socialism set in motion a series of relationships with organizations such as the *Liga de Artistas y Escritores Revolucionarios*, LEAR (League of Revolutionary Artist and Writers), and its prolongation as the *Taller de Gráfica Popular*, TGP (Workshop of Popular Graphics), founded in 1937. In this workshop that flourished under the leadership of its founder Leopoldo Méndez and which Hannes Meyer joined in 1941, Porset met Mexican painter Xavier Guerrero (1896–1974) who became her husband and with whom she often collaborated. Her long life commitment with the Cuban independence, the force that initially drove her out of Cuba, made her go back in 1959 after the triumph of the Revolution, to establish the first school of design in that country. It is interesting to note that the establishment of this institution is contemporary to the *Hochschule für Gestaltung* or Ulm School of Design, funded in Germany under Max Bill in 1957. In 1965, when she came back to Mexico, besides a successful personal ca-

<. Clara Porset. Photo from Archivo Clara Porset/Oscar Salinas.



Figure 1. Interior design and furniture of the Pani House in Acapulco, **Mario Pani** and **Enrique del Moral** architects, 1952. Photo by Guillermo Zamora, Louise Noelle Archive.

reer, she had an important connection with education in the School of Industrial Design of the National University (UNAM).⁸

The recognition of her Cuban work and her personal talent understanding local conditions, served as an important starting point for her work in Mexico. Whilst there she took on a series of collaborations with relevant architects of the Mexican Modern Movement, designing furniture that was perfectly suitable for their projects, which included houses, offices and hotels. It is important to note that most of the time her inspiration comes from the vernacular, a fact apparent in the furniture specially meant for the Mexican tropical climate. Some of her most recognized and celebrated works were the ones made specifically for the houses of Mario Pani and Enrique del Moral in Acapulco and Cuernavaca in the 50s⁹ [figure 1]. Both architects approached her to work on the furniture of buildings that called for relaxed and tropical furnishings.¹⁰ Furthermore, Pani published her work in his magazine, *Arquitectura/México*, on several occasions.¹¹ She was also close to Enrique Yáñez, who invited her to

participate in the successful 1952 exhibit "*El arte en la vida diaria*" (Art in Everyday Life) [figure 2] at the Palacio de Bellas Artes. By 1957, she also participated in the interior design of Yáñez' own house, located in el Pedregal de San Ángel. Other Mexican architects that invited her to work with them on specific projects include Guillermo Rossell and Honorato Carrasco for the Chrysler factory project (1953), Juan Sordo Madaleno for the *Cine París* (1954) and Max Cetto for the Hoechst laboratories (1955). Also there are pictures of her chairs in the Shulman House (1952), by Raphael Soriano.

Probably the best known of Porset's collaborations, is the one with Luis Barragán: she designed various chairs for the residences he built, most noteworthy the ones known as "Butaque" and "Miguelito" [figures 3a, 3b]. The "Butaque" [figure 4], a type of chair found in the Mexican and Caribbean rural dwellings that Luis Barragán used in the houses he designed, became a famous design and has even led to wrongful attributions to the architect. Porset contributed as well with a good number of garden, lounge and pool chairs and tables for the Hotel



2

Pierre Marqués, where Barragán designed the gardens; the manufacture of the above-mentioned furnishings, was undertaken by Industrias Ruiz Galindo [figure 5].

It must be pointed out, that alongside these important commissions, Porset also tackled designs suited for the less privileged. By 1940, she participated with Xavier Guerrero in "Organic Design for Home Furnishing", a competition organized by MoMA in which she obtained one of the four prizes with a collection of what she called "rural furniture".¹² It is also the case of the furniture designed especially for the small apartments of the first Mexican Modern housing unit by Pani, the Centro Urbano Presidente Alemán, CUPA (1949), where she took into account the cost of the materials as well as the size, suitability and multipurpose of the furnishings; tables, desks, chairs, beds and cupboards, achieved a perfect balance and assimilation with Pani's architecture, making it is possible to say that we find here an integration, the one Le Corbusier called "a coherent whole". In these designs we find two different sets of basic fixtures, directed at a diverse clientele, the first one related to the Modern Movement and the building itself, the second one taking into account traditional concepts.

As she stated in her article "*¿Qué es el diseño?*" (What is Design?)¹³, after World War II Mexico was shifting from handicrafts to industrial processes in various fields, including that of home furnishings, where industrial design became central. This signaled the importance of enabling cultural institutions, such as museums, to divulge the qualities of good design, and proper schools to foster this type of approach. For Porset the necessary and



3a



3b



4

Figure 2. Exhibit "*El arte en la vida diaria*" at the Palacio de Bellas Artes, 1952. Photo from Archivo Clara Porset/Oscar Salinas.

Figure 3a. Chairs of the Prieto López House, **Luis Barragán** architect, 1950. Photo by Louise Noelle.

Figure 3b. Chairs of the Gálvez House, **Luis Barragán** architect, 1957. Photo by Louise Noelle.

Figure 4. Butaque. Photo from Archivo Clara Porset/Oscar Salinas.

beneficial bond between art and industry proclaimed by Hugo Haring and Le Corbusier¹⁴, amongst many others, needed to be further clarified in order to understand and explain "What is design?" That is why materials are so intrinsically important for Porset, as is their relationship and participation into what she called the fostering of a Mexican industry. Furthermore, the rapid changes of 20th century society in developing countries was a substantial part of her concern, looking to find a balance between tradition and modernity [figure 6].

The form and materials evolved in several pieces of furniture still copied in the present times. Some of her chairs

take inspiration in Caribbean and Mexican examples, profiting from the diversity of lumber and other natural elements as wicker and cotton. In other cases, metal bears the frame, but always in perfect harmony with organic elements, that maintain the sensuality and richness of her designs. Simplicity was for her the principal virtue of Modern design, with comfort and functionality integrated to the plastic emotion as an added value. Then, the final ideal was to make these furnishings available to all.

Clara Porset obtained throughout her life various prizes and recognitions, as is the case of the wicker chair that garnered an award in the Milan Triennial of 1957; it is a

Figure 5. Garden chairs and tables for Hotel Pierre Marqués in Acapulco, 1956. Photo from Archivo Clara Porset/Oscar Salinas.



very simple chair and stool, made of wicker over a metal frame, which punctuates her interest in artisan fabrication after a careful design [figure 7]. She also participated in the exhibits “El objeto cotidiano en México” (1969), and “Diseño en México, retrospectiva y prospectiva” (1975), both in the Museum of Modern Art in Mexico City. By 1971 she was awarded the Gold Medal of the National Institute of Fine Arts, for her role as pioneer of industrial design in Mexico.

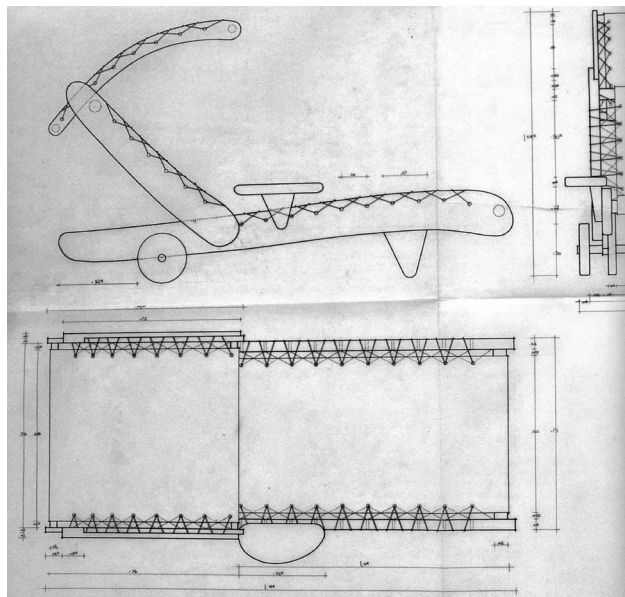


Figure 6. Drawing for the manufacture of a lounge chair with parasol, for the Hotel Pierre Marqués. Photo from Archivo Clara Porset/Oscar Salinas.

The boldness, power and success of the designs of Clara Porset and the quality of the results have made possible and essential the appreciation of her work in the light of this 21st century. Her innovations within tradition embody the very ideals of the Modern Movement and at the same time she can be considered as one of the pioneers of Regionalism, taking into account not only the elements for the production of furniture, but the complete scope of total interior design.



Figure 7. Wicker chair that obtained a prize in the Milan Triennial of 1957. Photo from Archivo Clara Porset/Oscar Salinas.

Notes

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2. Ibid., “Hugo Haring: Formulations towards a reorientation in the applied arts”, 103.
3. Ibid., “CIAM: La Sarraz Declaration”, 109.
4. She died in Mexico City in 1981. For further information see Oscar Salinas Flores, *Clara Porset. Una vida inquieta, una obra sin igual*, Mexico, UNAM, 2002 and Clara Porset’s Design. Creating a Modern Mexico, Mexico, Museo Franz Meyer-UNAM, 2006.
5. Henri Rapin, 1873–1939, was a French painter, illustrator and interior decorator; he was very active in the renaissance of the applied arts.
6. *Bauhaus, a conceptual model*, Berlin–New York, Bauhaus Archive–MoMA, 2009.
7. Hannes Meyer, the second Dean of the Bauhaus, lived in México from 1939 to 1949.
8. The Clara Porset Archive is located in this institution.
9. “Hotel Pozo del Rey”, “Conjunto de cinco casas”, “Villas Monte Mar” and “Casa Sr. Luis R. Montes”, *Arquitectura/México* n° 46, Mexico, June 1954.
10. By Del Moral the House De Yturbe, “Casa en Acapulco”, *Arquitectura/México* n° 13, July 1943; by Pani the House Lima, “Residencia

en Cuernavaca”, *Arquitectura/México*, n° 37, March 1952; and by Del Moral and Pani, “Hotel Pozo del Rey”, “Conjunto de cinco casas”, “Villas Monte Mar” and “Casa Sr. Luis R. Montes”, *Arquitectura/México* n° 46, June 1954.

11. *Arquitectura/México* n° 28, 29, 32, 37, 62 and 90, published between 1949 and 1965.
12. *Organic Design for home furnishings*, New York, Museum of Modern Art, 1942.
13. Clara Porset “¿Qué es el diseño?”, *Arquitectura/México*, n° 28, 1949. Also relevant is Clara Porset’s “Diseño industrial”, *Arquitectura/México* n° 90, 1965.
14. See note 2 and Le Corbusier, *Vers une architecture*, Paris, Les Éditions G. Cres, 1923.

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Gaston Eysselinck and his Masterpiece. The Post Office Building in Ostend (1945-1953)



The city of Ostend became severely damaged during World War II. Practically all the main public buildings were destroyed: the City Hall, the Casino, the Horse Race-Track, the main Post Office building, etc. The city decided to rebuild a new Post Office on the location of the first construction. In 1945, architect Gaston Eysselinck (1907–1953) from Ghent was assigned to design the new main Post Office (PTT), including the telephone and telegraph offices (RTT) and the technical infrastructure. The project in Ostend was his first big assignment.

By Marc Dubois

As a young architect, Eysselinck figures on the 'legendary' group picture of the CIAM meeting in Brussels (1930). Eysselinck was able to present himself as the architect of several houses, and especially his own house in Ghent (1930–1932), a project that was included in Alberto Sartoris' *Gli Elementi dell' Architettura Funzionale* (1935).¹ He was the head of a group that worked on the urbanisation of the city of Ghent, a study that was supposed to be presented at the CIAM congress in Liège in 1939, although this meeting was cancelled. In 1945, Eysselinck moved to Ostend, where he died in a tragic way in 1953.² Eysselinck can be described as a "passionate functionalist", strongly influenced by Le Corbusier, Adolf Loos and Russian architecture.

In 1945, architect Jean Eggericx (1884–1963) was assigned as chief town planner of Ostend. As a Modernist, he became famous in the 20s with the "Cité Jardins" near Brussels. He was also professor at the ISAD in Brussels which was directed by Henry Van de Velde. One of his first interventions in Ostend was a broad, straight boulevard from the end of the motorway to the Casino, situated at the sea dyke.

In November 1945, Eysselinck presented his preliminary design which was heavily criticized by Eggericx. There was a lack of sculptures on the front façade and Eggericx advised him to decorate the exterior with bas-reliefs. The idea of a detached sculpture in front of the façade was rejected and the use of rough, unprocessed bluestone in certain parts of the façades was heavily criticized. It didn't seem to be appropriate for such a stately building. The hardest criticism was given on the whole volume of the building: the entrance wasn't well enough accentuated and the main volume had been moved further back by ten meters in comparison to the existing building line.

Starting in November 1945, Eysselinck made perspective drawings including the surroundings. The divi-

sion of the building in two parts is a clear sign of the organization of the building inside: the low building in the front is accessible for the public, while the high building was for the administration and the employees. The first and second floors contain the telephone exchange and on the top floor there is a kitchen and a large restaurant for the employees, including a terrace on the south side of the building. Throughout the whole design, the architect thought about the facilities for the employees, such as the small auditorium.

Another reason for the volume positioning was to give more light to the small side streets next to the building. According to Eysselinck, the division complied with the new boulevard that Eggericx himself had introduced. The lower part was designed regarding the scale of the street, next to the building, while the main part was designed according to the scale of the new boulevard. For Eysselinck, a convinced functionalist, the ground plan was "le générateur", the generator or motor of the project. Since the public part of the Post Office had to be much larger than the part for telephony and telegraphy, the entrance with stairs was placed asymmetrically. Both parts needed to be used during day time, while the RTT part was used 24/7. That is why Eysselinck provided the part above the stairs with a glass structure, so that there would be permanent illumination during the evening and night time. Through three revolving doors, the public entered the building. And with a big, movable partition, the part of the building for post services could be separated from the RTT part.

The division had an extra advantage: natural light could enter the building above the counter. The large hall of the post office contains a curved ceiling, made out of aluminum, which allowed the architect to make a soft transition between the main hall and the counter. The zenithal illumination above the counter strongly influences the whole space: it works as a propelling, orientating power from the dark entrance towards the counter.

Eysselinck stubbornly kept on refusing to move the main volume forward as Eggericx demanded. In the front façade, Eysselinck designed a big glass surface in green

< Post office Building project, February 1947.
Photo from the Design Museum Gent, Archive Eysselinck.

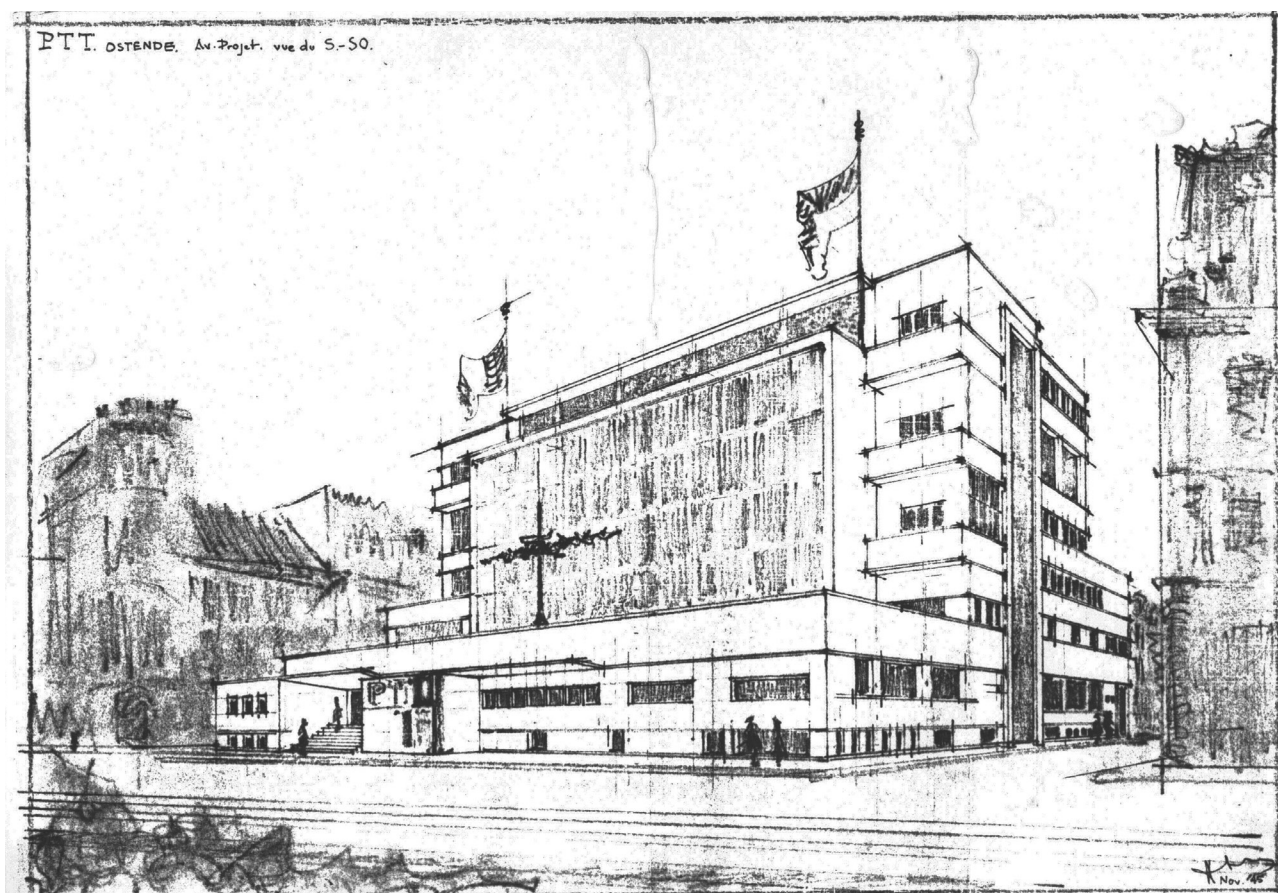


Figure 1. First project. November 1945. / Figure 2. Project, February 1947. —/ Figure 3. Building in the 60s with the sculpture of Jozef Condré. Photos from the Design Museum Gent, Archive Eysselinck.



glass which had a relation with the big brass sculpture. Eggerix asked him to divide the big surface so that the armature of the construction would be visible, a detail which we can see the architect adapted in the perspective drawings, and which was the main concession of Eyselinck. In 1946 he worked on the construction plans, in collaboration with engineer Mallebrancke and a team of young architects. In these plans, the architect drew everything: the grooves in the floor to place bicycles, the fixed furniture and even a design for the numbers on the telephone cabins. He even allowed artist Jozef Cantré (1890-1957) to draw his design for the big sculpture "De Vijf Werelddelen" (The five continents) on the building plans. The first stone was placed in April 1947 and during 1947 and 1948 some recently graduated architects came to work for Eyselinck, like Zdenek Králiček and Willy Van der Meeren (1923-2002).

"New Monumentality"

At the end of the 30s, a lively discussion started, debating on the direction that new architecture should take.

A new type of architecture, less obsessed by the ascetics and nudity was under discussion. An outstanding example of this discussion is the design of the Shell building in The Hague by architect J.J.P. Oud (1937-1948).³ For many people, this building represented a logical evolution, while the avant-garde architects considered the building as a step backwards, maybe even as a treachery. In 1943, Sigfried Giedion, the secretary of the C.I.A.M., argued in the text "nine working points for monumentality" for a 'return to this monumentality' and collaboration with visual artists.⁴ This text was the result of a collaboration between Josep Lluís Sert and Fernand Léger. He repeated this idea one year later in a text called "the necessity of a new monumentality".⁵ This 'new monumentality' was presented as a theme on the 6th C.I.A.M. in Bridgewater in 1947 by a group of people including Giedion.⁶ For the first time, the C.I.A.M. paid attention to the aesthetical aspect and to the collaboration with artists.

At the same time, the PTT/RTT building was under construction. While Oud chose a tight symmetrical design for his Shell building, Eyselinck decided to go for a re-



Gaston Eyselinck and his Masterpiece. The Post Office Building in Ostend (1945-1953)

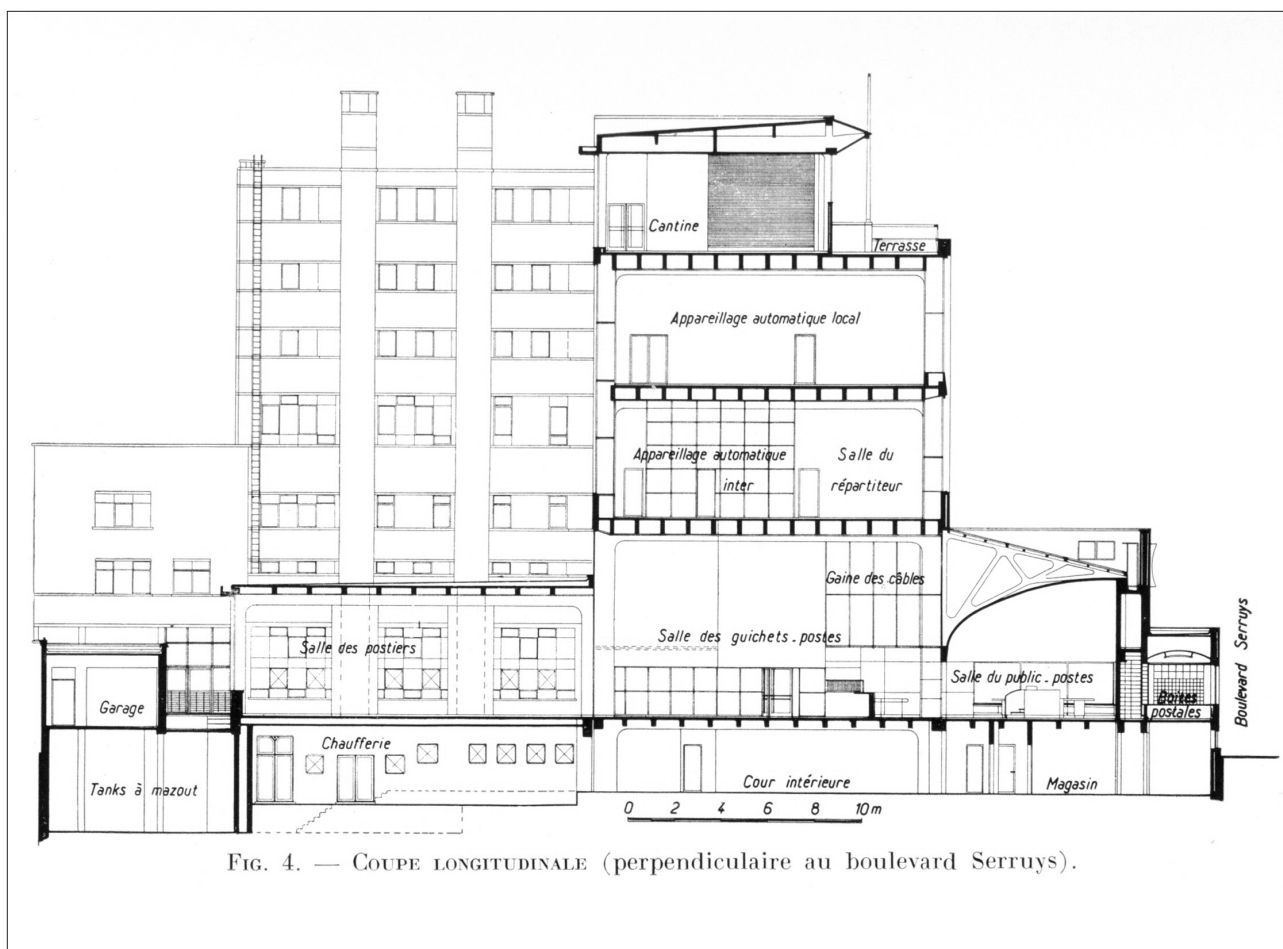
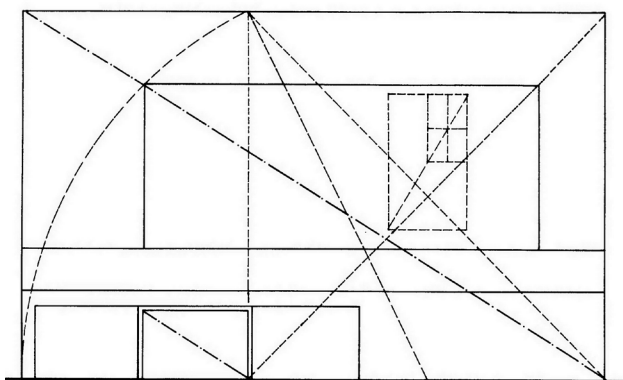


FIG. 4. — COUPE LONGITUDINALE (perpendiculaire au boulevard Serruys).

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finer composition with a balance between symmetry and asymmetry. The ground plan stays the most important element of the design. Oud reintroduced the ornament, but Eysselinck rejected it. He chose a completely new way to reinforce the expressive power of a public building. There are two approach lines: the priority of the use of natural stone and the introduction of visual arts. By using granite, bluestone and travertine, the building doesn't seem to be

a cold and impersonal creation. The relation between nature and people was of crucial importance to Eysselinck. But most of all, he believed in the aesthetic joy one gets from high quality natural stone. The application of a band of rough bluestone wasn't only done for compositional reasons but also to break with the monotony of the facade. With this form of "New Brutalism", Eysselinck occupied a special position within Belgian architecture. In



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his striving for a diverse use of natural stone, we can see his big admiration for the work of Adolf Loos.

Eysselinck knew very well the Russian architecture from the 20s. In 1930 his wife gave him the now legendary book of El Lissitzky about Russian architecture. In this book, there were four photographs of the Gostorg building, but also some pictures of the "Isvjestia" building in Moscow (1925-1927) by Grigorij Borisowitsch Barchin.

The stairs in the "Isvjestia" buildings are visible behind a window that covers the whole building. A detail picture of this vertical window, in combination with the balconies on each floor, evokes directly an associative image with the PTT of Eysselinck in Ostend.

The PTT/RTT building—otherwise devoid of all classical elements—is completely and harmoniously organized according to the golden section principle, showing Eys-

selinck's conviction that architecture builds on the attempt to realize harmony and control of nature.

Eysselinck was opposed to the then current opinion of authorities and many artists on the relation between architecture and sculpture which was described as a sort of "mural aesthetics", which meant the installation of sculptural elements on the big and closed-off elements of the façade. The idea of adding a strongly, free standing expressive element to a functional building derives from Le Corbusier. The inspiration for Eysselinck was the way in which Le Corbusier placed the sculpture on the façade of the building of the League of Nations in Geneva. It can be considered as an autonomic, expressive volume that is brought to life by the work of shadows on the wall behind the sculpture. The walls are the domain of the architect, not of the sculptor. There is no other building in Belgium, with the sole exception of the PTT/RTT building, which received a large sculptural addition to the façade between 1945 and 1955.

Eysselinck also made room for ceramic works in the main hall of the Post Office. At both ends of the curved ceiling, two ceramic works are emplaced. They represent the old and the new post traffic in a metaphorical way. The ceramic works of art were done by the young Ostend artist Jo Maes.⁷ In the public area of the telephone services (at the left side of the entrance), fourteen sand-blasted glass works of art are emplaced. They represent the history of telephony and telegraphy. These works are emplaced in a very interesting way; the daylight enters in the interior of the room through a horizontal window, and during the night the glass panels are visible through the illumination which was placed behind them. At the same time, it shows a horizontal line of light on the façade.

Nevertheless, there are big differences in the use of materials between the Post Office and his first works. Around 1930, for example, in his own house, the manifestation is determined by the painted plasterwork, which aims at a dematerialisation of architecture. His first buildings fit in with realisations and constructions that one can describe as "International Style" of New Building in Europe.⁸ In his building in Ostend, the physical aspect of materials becomes a theme. Natural stone isn't plastered in a non material way; it is used as a '*matière brute*'. Eysselinck's change in style didn't happen suddenly, as it can be seen in some of his realisations from the end of the 30s. Once again, one can see a parallelism with the oeuvre of Le Corbusier in which the white purist villas from the 20s strongly differ from his works in the 30s and the post-war buildings, which have a more brutal character. In the interior of the Post Office, granite is also used for the fixed furniture, which shows Eysselinck's choice for durability and a dignified character. Little by little, we see a plastic-

ity coming forward in Eysselinck's work, like for example in the low ceiling in the PTT part of the building: there is no doubt that the organic design of Isamu Noguchi influenced this work.

For the Post Office building, Eysselinck also developed some interesting stone dressings. He also applied them in 1948 in his own house, redoing the façade with bluestone. We could say that his own house was used as a laboratory.⁹ 'Durability' was certainly a necessity for Eysselinck, especially in a public building. He was convinced that one should even pay more attention to this characteristic when building on the sea side. For the top part of the building, he provided different types of natural stone. He also demanded bronze window frames, since the climate can be quite aggressive at the Belgian sea side.

Eysselinck's energy in the Post Office building went not merely to soundly work out the basic concept but to the technical elaboration as well. The Post Office building was apparently an attempt to prove that the application of classical building materials can be reconciled with Modern functional construction, and that the architect is obliged to count with the durability of his realization, especially when it concerns a public building.

In 1952 there was a rift between Eysselinck and his client. The city wanted to open the Post Office building without Cantré's sculpture, something unacceptable for Eysselinck. He and the engineer were expelled from their assignment and the Post Office Building was opened in 1953 and Cantré's sculpture was added in 1963. After Eysselinck's death, the building was extended twice, blurring the witty transition to the adjacent houses.

Simultaneously with the discussions on the relation between functionalism and aesthetics, Eysselinck realized his monumental building, superseding the rigid functionalism that would reach its summit from the 60s onwards. At the same time, the building also became a tragedy for Eysselinck: major resistance against the project and the loss of his loved one resulted into his suicide in December of 1953.

It was not until 1971 that the building received real appreciation, described by Geert Bekaert as "the first and most important realization after 1945".¹⁰ The listing of the Post Office Building as a monument in 1981 contrasts with the incomprehension and negative criticism which it was confronted with throughout its turbulent generation history.

The City of Ostend bought the building in order to transform it into a cultural centre called "De Post" (The Post). The architectural firm B-Architects from Antwerp won the competition for the restoration and for the new addition; the second extension, which was not designed

by Eysselinck, was torn down for the restoration. The opening is planned for the beginning of 2013.

For many reasons, the Post Office building is a unique document of its era and truly a "monument" in Belgian post-war architecture. It is a building that is incorrectly forgotten in the international historiography.

Notes

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3. Dubois, Marc, "Architect Gaston Eysselinck en zijn meesterwerk, het postgebouw in Oostende", *Monumenten en Landschappen (M&L)*, n° 1, Brussel, 1986, 8-22.
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6. Sert, Josep Lluis; Léger, Fernand, Giedion, Sigfried, "Nine points on Monumentality" (1943), Oackman, Joan, ed., *Architecture Culture 1945-1968*, New York, 1993, 29-30.
7. Giedion, Sigfried, "The Need for a New Monumentality", P. Zucker, ed., *New Architecture and City Planning*, New York, 1944, 549-568.

8. Mumford, Louis, "Monumentalism, Symbolism and Style", *The Architectural Review*, vol. CV, n° 628, April 1949, 173-180.
9. Van der Woud, Auke, *C.I.A.M.-Volkshuisvesting-Stedebouw*, Delft, 1983, 83.
10. Giedion, Sigfried, *A Decade of New Architecture*, Zürich, 1951, 31-32.
11. Jo Maes (1923) studied at the Academy of Ghent from 1939 until 1946. The two ceramic works of art in the post office building were produced by the firm Florizoone from Nieuwpoort. The glass panels in the telegraphy part of the building were made by Gustaaf Rigelle, from Ghent.
12. Eysselinck built three plastered buildings: his own house in Ghent (1931), the Peeters house in Deurne (1932) and the Hoogenbemt-Contrijn house in Mechelen (1934). The first two works were included in the important publication of Alberto Santoris, *Gli Elementi dell' Architettura Funzionale*, from 1935. They were also published in the third edition of 1941 (together with the Rombouts house in Bosvoorde).
13. Eysselinck, Gaston, *Natuursteen-Bekledingstechniek*, *Architectura*, n° 4-5, 1948, 56-58.
14. Bekaert, Geert; Strauven, Francis, *Bouwen in België 1945-1970*, Brussel, 1971.

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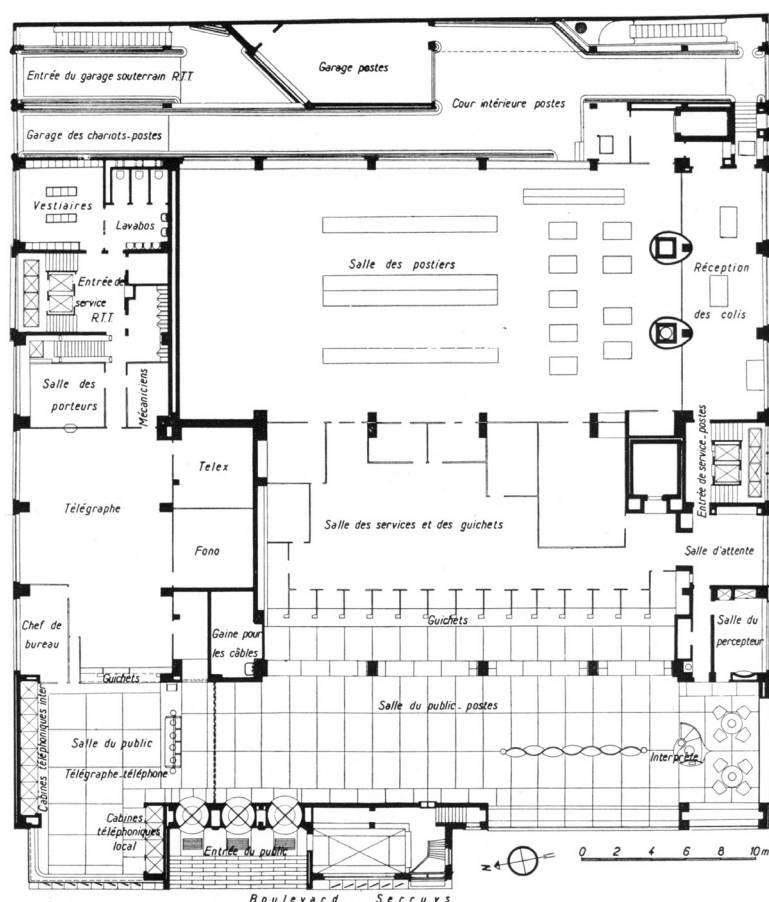
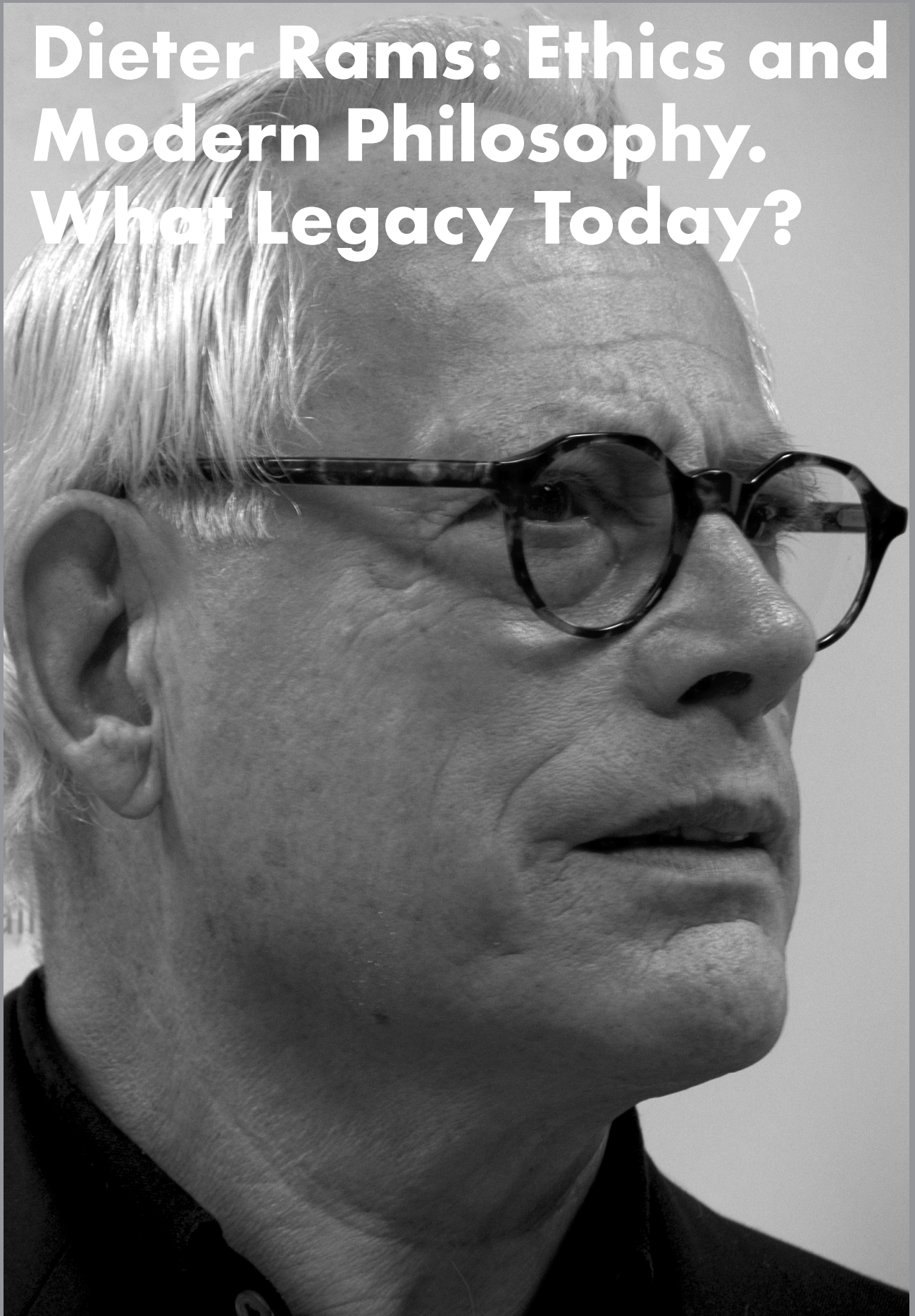


Figure 7. Plan at the lower part of the public area. Photo from the Design Museum Gent, Archive Eysselinck.

Dieter Rams: Ethics and Modern Philosophy. What Legacy Today?



German industrial designer Dieter Rams has turned eighty this year. His attitude towards product and industrial design, which he has been developing since the 1950s, once again arouses keen interest today. On the occasion of his birthday, a major German daily newspaper saw in him the representative of a 'present-day Modernism that is not as megalomaniac as that of the 20s, 30s and 50s' and also not 'the adolescent unleashing that we erroneously call Postmodernism.'¹ A revision of Postmodernism or, more correctly, a new 'revision of Modernism', certainly seems to have come to stay. Konstantin Grcic, undoubtedly the most prominent German designer active today, wrote in the same newspaper one day before: 'the product lines that Rams developed for the Braun and Vitsoe corporations have founded our notion of representational form and function. The once—from the pre-Grcic generation—so-called cool technocrat Dieter Rams, has now been rediscovered by virtue of his "almost romantic look at the manufacture of products."'²

By Klaus Klempe

Rather my goal is to omit everything superfluous so that the essential is shown to best possible advantage.

Dieter Rams, 1980

What distinguishes the particular stance of this designer, who is more popular today among young designers than almost any other? This will be concisely outlined on the basis of his ten design principles.³ In the second part, an essential element of Braun and Dieter Rams' design culture will be presented, namely design transfer and the transformation of shape elements.

1. Design Ethics⁴

Above all in the second half of his professional career—in other words since the mid 1970s—Dieter Rams has reflected on his own activity but also that of industrial designers in general and expressed his theories in innumerable lectures and publications. This was not at least of all the case during his lecturing post at the Hamburg Academy of Fine Arts since 1981.

In this context his ten principles occupy a central position—with the emphasis on principles and not apodictic rules—which he developed over the course of time. First signs are to be found in a lecture he gave in Canada in 1975.⁵ Amongst other things he remarked: "three general rules govern every Braun design—a rule of order, a rule of harmony and a rule of economy".⁶ Rams took up an early analysis of Braun design by Richard Moss, which the latter had articulated in November 1962 in the magazine

"Industrial Design" which was published in New York.⁷

In one of Dieter Rams' lecture manuscripts dated September 1975 "The Designer's Contribution to Company Success."⁸ the following subtitles cropped up "function and performance, feasibility and aesthetic quality". Dieter Rams first speaks specifically about design principles at an International Marketing Meeting in February 1976.

On May 10, 1983 at a symposium of the Royal Swedish Academy of Engineering and Science he also summarized his remarks in six principles, which he subsequently also articulated at the end of other talks, for instance in Boston 1984: "1. Good Design is innovative, 2. Good design renders utility to a product, 3. Good design is aesthetic design, 4. Good design makes a product easy to understand, 5. Good design is unobtrusive, 6. Good design is honest."⁹ Dieter Rams specifically formulated his then ten principles in a lecture during the 1985 ICSID Congress in Washington.¹⁰ The additional four principles were as follows: "Good design means durability, Good design means consistency down to the last detail, Good design means respect for the environment and Good design means as little design as possible." Durability and respect for the environment can both be seen as coming from the advanced environmental discussion of the time, while the importance of the detail has always been an important aspect of Dieter Rams' work, which was simply reiterated here and "as little design as possible" was on the one hand a response to the excessive Postmodernism in the mid-1980 but also the credo of Dieter Rams' work per se.

There is a one-page paper in Dieter Rams' archives from June 1987 in which these ten principles were published under the title "Braun design department's Design Philosophy".¹¹ As Rams himself recalls it these principles were primarily developed for the Braun Design Office itself, you might say as a self-reflection on their own work.

< Dieter Rams at an exhibition in East Westphalia, Germany, 2005. Photo by Gerhard Milting, Detmold, Dieter Rams Archives.



Figure 1. Vitsoe armchair programme 620. Glass fibre reinforced polyester shell in white, gray or black leather or fabric upholstery, 1962. Photo by Koichi Okuwaki, courtesy of Dieter and Ingeborg Rams Foundation.

Their gradual evolution demonstrates a dialectic relationship between theory and practice, which had made an entry into the design department around 1975. However, this articulation of theories, which precisely in the 1970s saw a boom worldwide, did not serve to paralyze the design activity of Dieter Rams and his team, as largely happened in the 1960s in the HfG Ulm. The productivity of innovative design at Braun remained as high as ever.

However, this articulation of principles by Dieter Rams also indicates a shift in his own take on his work approach. The concept of orderliness still employed by Rams in 1975 and specified by Richard Moss is omitted. By omitting it Rams broke free of a key concept of classic Modernism that was still used by Max Bill. However, what are retained are the initial concepts of design aesthetics and economy of form. The first step for Rams was to add as criteria for good design the following: innovation, usefulness, honesty and being self-explanatory. While the first three terms are also associated with classic Modernism the concept of being self-explanatory makes sense when seen against the background of the new technical complexity and is highly relevant again today. The Braun

operating instructions for the Nizo cameras but also for the hi-fi systems were no more than a few pages, and you could really manage without them.

In the final phase of devising the principles Rams included the environmental and resources aspect (durability and respect for the environment) but also the importance of the detail. The latter was as important for him as it was for the Eames, who expressed their conviction succinctly: "Ultimately it is always the details that breath life into a product." A final interesting point is the notion of restraint that Rams introduced to the design debate and expressed as follows: "Products should be as neutral and reserved as possible, leaving room for the users' self-expression." In other words reduction is seen here as offering the user a means of expression and not as a limitation or even a normative specification. Reduction may also be viewed in analogy with Marshall McLuhan's idea of 'cool media', which evoked active participation on the part of users.¹²

In 1990, at the opening of the exhibition "Designed in Germany" Dieter Rams emphasized once again the practical application of theories and principles: "Design



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Figure 2. Meeting with the Marketing Team of Hi-Fi equipment. Photo by Abisag Tüllmann, Dieter Rams Archives.

Figure 3. Braun ET 66 calculator. Main body made of black plastic and buttons of brown, yellow, green and red plastic. 1987. Design by **Dieter Rams** and **Dietrich Lubs**. Photo by Koichi Okuwaki, courtesy of Dieter and Ingeborg Rams Foundation.

Figure 4. Braun SK 4 Radio-Phono-Kombination, 1956. Design by **Hans Gugelot** and **Dieter Rams**. Photo by Koichi Okuwaki, courtesy of Dieter and Ingeborg Rams Foundation.

Figure 5. In 1968 a new line Hi-Fi device was created: the compact radio receiver combined with an amplifier of high performance. From the flat rectangular product line of 1959, studio 2, the 500 series was developed as devices with an aluminium and steel housing and with a display panel where all the controls were located. Model "Regie 550", 1976, design by **Dieter Rams**. Photo by Koichi Okuwaki, courtesy of Dieter and Ingeborg Rams Foundation.



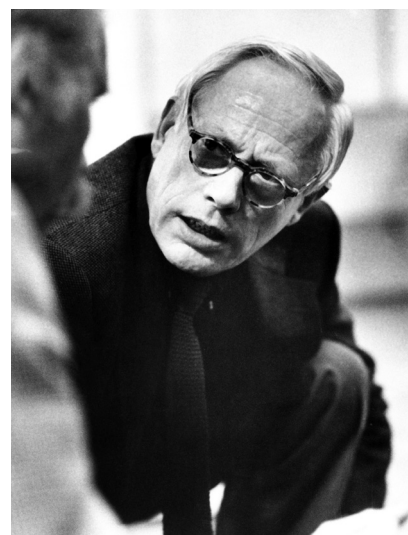
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Figure 6. Relocation of the Braun design department to Kronberg in 1972. **Dieter Rams** in his office on the occasion of the publication in Lufthansa Magazine. Photo by Tim Rautert, Dieter Rams Archives.

Figure 7. **Nils Vitsoe** with **Max Werner Engelhart**, who succeeded **Wolfgang Wetz** as Sales Manager, c. 1975. Dieter Rams Archives.

Figure 8. Studio at *Haus Rams* in Kronberg, c. 1975. Photo by Marlene Schnelle-Schneyder, Dieter Rams Archives.

is not a theory or a philosophy. Design is a practical art, evolved under continuously changing social conditions. Therefore, it is probably best to frame hypotheses which are regularly tested for their viability, so as to derive from them a sensible action plan. It is unquestionable our task to overcome the deficit in sensuality engendered by Modernism. To clad it in the mantle of Post-modernism would be a sad triumph for cynical rationalism."¹³

At the start of the 1990s Dieter Rams stressed the relationship between rationality and cultural quality, between art and technology and frills: "It would be desirable to expand the functional concept so that it is no longer abused to justify an economically motivated, rigid canon of forms. Objects must also possess, and exert fascination. However, it should emanate from the objects themselves and not be tacked on for the sake of artificial affectation and superficial decoration. Even if the concept of functionality were to abdicate part of its absolute, authoritarian leadership and its influence on society, the rationality on which it is based need not be surrendered. Retaining the functional constants—simplicity, intelligibility, utility, longevity—does not mean bogging down in stagnation. They quite surely provide a basis permitting the development of new forms. Designers, however, should not let themselves be deluded into thinking exclusively in technocratic categories; rather they must bear in mind that their most important potentials—creativity and innovation—are no less influenced by art. Their vision must embrace both technology and art."¹⁴

Dieter Rams succeeded in acting as a bridge between classic Modernism and the present-day, though he did not, as in Ulm, substitute the "reform touch" of that early avant-garde, the "Montessorian" still evident in the products of the Bauhaus and New Frankfurt, for a cynicism of the technical but achieved a formal language that was both precise and poetic. He achieved this by sensitively advancing most of the foundations of this very Modernism but not as a strict revision.

"Indeed, in my eyes indifference towards people and the lives they lead is the only sin a designer can commit. Design that does justice to the intended function comes about from the intensive, comprehensive, patient and thoughtful examination of life, the needs, wishes and feelings of people. The design of a product reflects the designer's vision of man... In the same way that you can read a person by the way they have furnished their living space."¹⁵

Today, Dieter Rams has a great number of admirers and followers among a younger generation of designers who feel their design ethics very deeply. Achim Heine, who for many years was in charge of the German Leica camera firm, may be regarded as belonging to this

generation, together with Jasper Morrison and Naoto Fukasawa. A prominent current reference to Dieter Rams' design ethics is Jonathan Ive at Apple, with his iMacs, iPods, iPhones and iPads. Many of these new products possess a visual appeal and functionality comparable to those of the devices designed by Dieter Rams and his respective teams for Braun and Vitsoe. To meet new technical requirements, new 'original' forms have emerged. The phenomenon of rupture between the existing and the new will be discussed in the following section.

2. Transformation and transfer

Practically no term has been so successfully used in product advertising over the last century as the word 'new'. It is the Western counter model to the Asiatic 'better'. Creating the world from scratch was the aspiration of renaissance artists who, with the advent of Humanism, broke the divine order to become creators of the world. This new dictum was given an enormous boost by industrialisation and has constituted the nucleus of Western culture until the present day. Even so, there have not been so many real innovations in the arts: the apparently new has almost invariably been developed from the existent, something that Johann Wolfgang von Goethe expressed as follows:

*Only from the appropriation of somebody else's treasures arises a big one.*¹⁶

People always talk about originality, but what does it mean! As we are born, the world begins influencing us and this goes on until the end. Anyway, what can we then call ourselves other than energy, power and will!—if I could say what I have come to owe to all great predecessors and contemporaries, not that much would remain.

Goethe zu Eckermann, May 12, 1825¹⁷

I would point out here that even the ancient and the medieval philosophers, from Aristotle to Thomas Aquinas, understood "*Ex nihilo nihil fit*" (from nothing comes nothing), just as Gottfried Semper formulated in the nineteenth century: 'new has to be no copy of the old and relieved from the empty influence of fashion.'¹⁸

Innovation, copy and transformation form three categories of design. Here the last one will be compared with respect to Dieter Rams' work. That it was constructive and innovative for him is further hypothesised. As a definition we may refer to the American "styling", which "was forced since the 30s to be aimed at the demand of competition and sales market"¹⁹ and that also transferred the extensive forms from one type to another. As an example, I should merely point out the speed suggestive drop form of the "Streamline", which Raymond Loewy used indis-

tinctly for locomotives (where it was no longer really functional or necessary) as well as for the mechanical pencil sharpener of 1933 or for the Coca Cola cooler. It was not about function but about production of symbols, as Elke Gaugele recognised: “parallel to the job outline of the industrial designers, ‘styling’ enhances the tasks of designers as a production of symbols, which should be built as much through a selective transformation of surfaces as through an intensified communication of the products.”²⁰ The predominance of sign characters of products was criticised immediately by the influential German graphic designer Otl Aicher: “[...] this temptation to raise everything from the symbol carrier, instead of making an insinuation of the looks or showing only its external shape, is a determining trend of today’s design [...]. A symbol is the authoritarian form of signs, the symbol carrying the product points to its user as subject, as submitted.”²¹

What is, therefore, the prominent feature of Dieter Rams’ design stance? Braun’s design defined itself initially as a clear rupture with existing models. The early 1956 SK4 Radio-Phono-Kombination, created together with Hans Gugelot, differed radically from the common radio sets of the time made of polished veneer with gold borders. This so-called ‘Snow White Coffin’, had identical front and rear sides and revealed its organised technology under the acrylic cover. But even this device had references to existing ones. Slits as loudspeaker openings already existed in the Braun radios of the early 1950s. The equivalence of all sides of an object, and consequently the possibility of freely placing it in different spaces, had already been featured in Walter Gropius’ Bauhaus Dessau building. The wooden frame construction by Hans Gugelot refers to classical carpentry work, while the acrylic cover finds its counterpart in equipment from Wilhem Wagenfeld for the manufacturer of household, “WMF”, of this period.²² The major creative breakthrough, however, was to be found precisely here: not only in the transfer of design elements but also in the abstraction of existing design forms and types and their transformation into a new product. The same is valid for many other product innovations and also for the Vitsoe furniture. In 1960 Dieter Rams designed in a short time his most important furniture systems: the Vitsoe 606 Shelving System and the Armchair Program 620. The furniture in the next years and decades increased and was complemented without reducing compatibility. A shelf from 1960 may be perfectly combined with today’s production. In the first seven to eight years at Braun, Dieter Rams and his team developed an extensive canon of forms which were always practically inserted and which ran through the whole product generations.

The color function of Braun devices and Vitsoe furni-

ture was also extremely reduced and self-reflective. This means that the overwhelming number of signs on these objects is directed towards the function and service of the device itself. As an example, I shall examine the Regie 550 receiver in some detail. The order of all the keys and rotary switches is subject not so much to a grid as to visually balanced categories. There is the oval function switch group, the one of the knob or the station and the frequency switches, all of which correspond to different geometrical forms and volumes. The function switches are high and concave; the station switches flat and convex. The knob has a gloriole of numbers, all of which appear in the dainty geometrical *Akzidenz Grotesk* font. The loudspeaker switch on the left and the rotary switch on the right define the external appearance (elements contrasting in form, such as the knob and dominant rotary switch). Finally, the complementary colours red and green are used, as well as the lower orders yellow and brown. A highly complex and precisely composed image is therefore formed of primary geometric elements. Everything looks motivated and comprehensible.

Dieter Rams and Braun’s design team invariably transferred and transformed developed forms. The drop-shaped rotary switch appeared in the early 1960s in the audio systems, while the flat, convex Regie 550 pressure switch became a central element of calculators. This example should suffice, but numerous such transfers on Braun devices may also be shown. This procedure led to two things: economy of form, where inventing something new was not always necessary, and as a result, and despite the different designer manuscripts, a recognisable Braun corporate design.

Dieter Rams and the Braun design team, of course, has been typical European inventors of new forms. No doubts about this. But the interest of this essay is the question “What is beyond invention?” Dieter Rams’ design process methodology derives, beneath the invitation of forms, largely on the one hand from an ethic catalogue as defined in the ten principles, and on the other from a commitment to transformative design. Even so, his designs are not schematic; the decisive point here is that the aesthetic and functional forms of the product are invariably placed in the centre of the design. The scheme or grid has never been a priority.

Anyone today, from design students to active designers, may benefit greatly from Dieter Rams’ ten principles and his praxis: Design as an everyday challenge.

Notes

1. *Welt am Sonntag*, May 20, 2012.
2. Grcic, Konstantin, "Wie Schönheit funktioniert. Dieter Rams hat unseren Begriff von Design erneuert", *Die Welt*, May 19, 2012.
3. A comprehensive description can be found in the catalogue for the exhibition "Less and More", Ueki-Poulet, Keiko; Klemp, Klaus, ed., *Less and More. The Design Ethos of Dieter Rams*, Berlin, 2012.
4. The following discussion of the first part largely follows the third Chapter by the author of the aforementioned volume, 489-495.
5. Since the early 1970s the Canadian government's program "Industrial Design Assistance Program" (IDAP), has organized annual design seminars to which internationally acclaimed designers are invited. In 1973 it was L. Bruce Archer; in 1974 George Nelson; and in 1975 Dieter Rams. Cited from the magazine "Canada Commerce", March issue 1976, Dieter Rams archives. [The Dieter Rams Archives are settled in the Museum of Applied Art Frankfurt].
6. Ibid.
7. Moss, Richard, "Braun", *Industrial Design*, New York, 11 November 1962. German translation in *Design+Design* 7, 1987, 6 f.
8. 26-page English-language manuscript dated September 22, 1975. Likewise a German version dated October 1976, Dieter Rams Archives.
9. Speech manuscript "Boston USA October 1984", Dieter Rams Archives.
10. Summary of the Congress in a text by the Braun Press Department "Worldesign 85", in Washington: "Neuer Auftrieb für gutes Design?" (New impetus for good design?), dated November 1985, publication of the ten principles, Dieter Rams Archives.
11. All speech manuscripts mentioned are in the Dieter Rams Archives.
12. According to McLuhan, this is the example of cool jazz, the telephone or the university seminar.
13. Dieter Rams, speech at the Opening of the Exhibition "Designed in Germany", May 1990, 3, Archives Rat für Formgebung.
14. Idem, 2.
15. Dieter Rams: *Anhang zu den 10 Thesen* (Appendix of the 10 principles), Dieter Rams Archives.
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20. Idem.
21. Otl Aicher and Hans Gugelot in Wichmann, Hans, ed., *System-Design Bahnbrecher. Hans Gugelot 1920-65*, Basle, 1987, 18.
22. Compare the butter dish with steel base and acrylic top from 1956 as well. It is unknown who was first with this idea, Wagenfeld or Rams. Both were engaged at Braun in those years. But the effect would be the same. Transform a part of a butter dish to a radio or a part of a radio to a butter dish.

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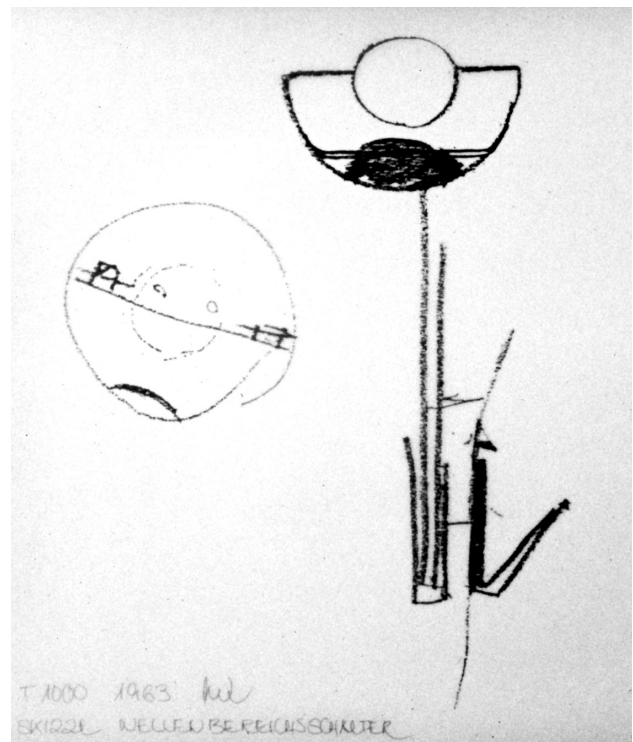


Figure 1. Waveband switch, a key design detail of the T 1000 world receiver. Sketch by **Dieter Rams**, c. 1962, Dieter Rams Archives.

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Between 1995 and 2005 he was a board member of the German Design Council and since 1998 he has been Research Associate and lecturer for Design History and Theory and Public Design in Nuremberg, Wiesbaden and Würzburg. In 2008 he was appointed Honorary Professor at the Rhein Main University of Applied Science in Wiesbaden. Since 2006 he has been Head of Exhibitions at the Museum of Applied Art Frankfurt and, since 2010, a board member of the *Dieter und Ingeborg Rams Foundation*.

He is also the author of numerous publications in the field of Architecture, Design and Fine Arts.

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ODAM and the Construction of a Modern Spirit

By Edite Rosa¹

The ODAM as divulger of modern architecture in Porto comprehends from the scope of teaching, professional practice, to its internationalization, as attests the participation of its members in CIAM's congresses from 1951. Its production, written manifestos, projects and builds, reveal its universal character through the deployment of Modern spirit, in the statement of a collective conscience of architectural practice, but also, affirms its local condition as its differentiator value. This retrospective and critical reading of the specific ODAM discourse as part of broader context that characterizes Modern Architecture (re)affirms its character simultaneously universal and singular.

The Organization of Modern Architects (ODAM) aims to promote the principles of modern architecture, seeking to affirm, through the own work of its components, how to form professional conscience and how to create the necessary understanding between architects and other technicians and artists. Therefore, the ODAM seeks to promote Modern Architecture through, exhibitions, conference publications, etc. The basis on which seats their professional labor, are:

- *Contribute to valorize the Individual and the Portuguese society. Encourage technical and lay people, architects, trained or in training, engineers and builders, to an efficient and effective work towards the progress of the country*

- *To obstruct that amateurism aggressive, dangerous and dishonest, spreads and throws architecture into chaos.*²

The New Social Role of the Architect

The ODAM³ congregated 36 architects linked to the School of Porto (EBAP *Escola de Belas Artes do Porto*) and constituted a turning point in Portuguese architectural production [figure 1]. ODAM fits in a universal project that pledged its commitment on new scientific and technological knowledge for the benefit of proper inhabiting conditions for all. This democratic and useful attitude of a new social role of the architect operates a qualitative leap in

architectural discourse. ODAM proposals criticize and accentuate the retrograde and stagnant regime position, based on archetypes of "imagery" and iconographic nature of past styles, monumental or regionalist. This attitude brought ahead in the 1945 inaugural text "*O Problema da Casa Portuguesa*" (The Problem of Portuguese House)⁴ of Fernando Távora, assumes itself as the first public stance against the inconsistent interpretations of the regime ideology, the denominated "Portuguese style", proposing an update through modern architectural values. This text is possible given the short opening policy of *Estado Novo* regime, in the post-war period that briefly allows internal freedom of expression enabling opponents of all cultural and intellectual sectors to criticize the current social, cultural and economic crisis situation. In this renewing debate at national level, as regards Ana Tostões,⁵ two organizations arise, the ICAT (*Iniciativas Culturais Artes e Técnicas*) in Lisbon in 1946, constituted by architects and artists, and ODAM in Porto in 1947, constituted by architects and students from the EBAP engaged in the renewal of the architecture discipline. In Porto, besides the opposition to the architectural norms imposed by the regime, it is the Modern position in architecture that conforms itself as a common premise. The group, consisting of heterogeneous personalities from political, cultural and generational point of view, has to justify the common understanding from academic formation (EBAP), centers of gathering creased among and inside the studios and the widespread lack of freedom and autonomy in discipline.

The ODAM group added three successive school generations of architects and architecture students.⁶ The first, formed between 1935 and 1940, tutelary figures of the group, consisting of architects who exercised their professional activity. The second, formed between 1940 and 1945, major force of the group, composed of recently graduated architects, working without CODA.⁷ The third, formed between 1945 and 1950, consists of members, still students, protagonists of the future construction of a Modern ideology in the Portuguese late 50s context.

The local importance of ODAM is reaffirmed at national level, through the visit of architects from Lisbon to Oporto in 1947, published in the Magazine *Arquitectura: Revista de Arte e Construção* with the title "*Inspirada lição de arquitectura moderna*", ("In-



Figure 1. Members of the ODAM in 1951. Photo of some members of the group at the Work Exhibition, Ateneu Comercial do Porto.

spired lesson of Modern Architecture")⁸ attesting the innovative nature of their works. This professional exchange will be decisive for an important national event, according to Cassiano Barbosa:

"[...]it is necessary to highlight ODAM's intervention as a union element of the will of North Architects towards the realization of the first National Congress of Architecture in Lisbon in 1948."⁹

In turn, the Congress encouraged the architects of the group to state up, writing its ideals, presenting thirteen individual theses and one collective one. ODAM's activity, disclosed initially in the 1948 Congress is strongly reaffirmed at the Exhibition and Cycle of Conferences held at the *Ateneu Comercial do Porto* in 1951. The addressed issues are applicable to all architectural problems, from housing policies to the means involved in the process of construction and its implementation, industrialization, standardization, promotion of new materials and even strategies of educating new architects. In the 1951 exhibition, the leitmotif of the group "Our buildings are different from the past because we live in a different world", a part of a MoMA's text, promotes adhesion to an international vision of Modern Architecture. A vision of social utopia identified by ODAM with the ideological assumptions of Modern avant-garde and CIAM's proposals, particularly those set out in the *Charte d'Athènes* and Le Corbusier's writings.

From the theoretical and practical group production, in which the construction of "ODAM's modern form" emerges, we can distinguish three learning moments of modern foundations.

Modern Manifesto versus National Aesthetic

Until the group's formation in 1947, its pre-modern form prevails characterized in the simultaneous use of "traditionalist" and "new spirit" citations.

The dichotomy between the Modern composing form and the traditional productive culture—always intrinsic to architectural ODAM genesis—expresses itself paradigmatically in the proposal of the CODA Delfim Amorim of 1947 [figure 2]. The dialectic discursive between the "new" and, or "old" advances to a selective import of international models adjusted to the social reality and local production. A "methodology of universal reason"¹⁰ mediated by an approach to Le Corbusier's universe that corrects the arbitrary composition of the eclectic academic education of EBAP in a simultaneously discourse of renewal of the Modern models and of the truth in beneath traditional architecture, as counterpoint to the false "traditionalist" architecture of the regime.

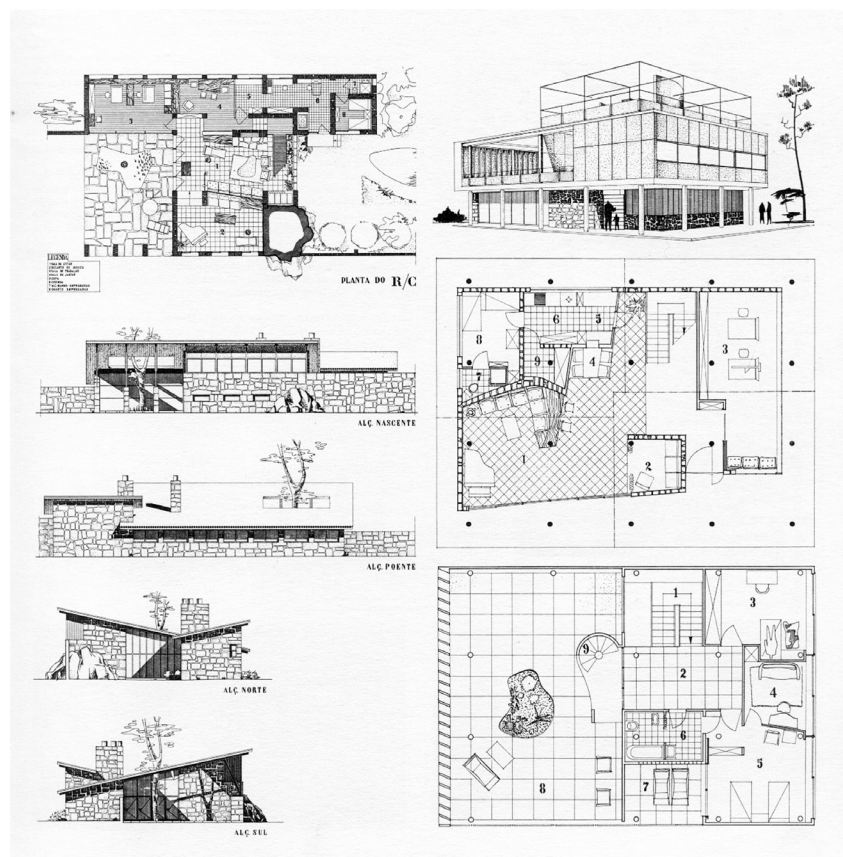


Figure 2. Delfim Amorim, CODA, My house, 1947, Porto, Portugal. Two different approaches: traditional and modern. Archive of FAUP.

Modern Scope

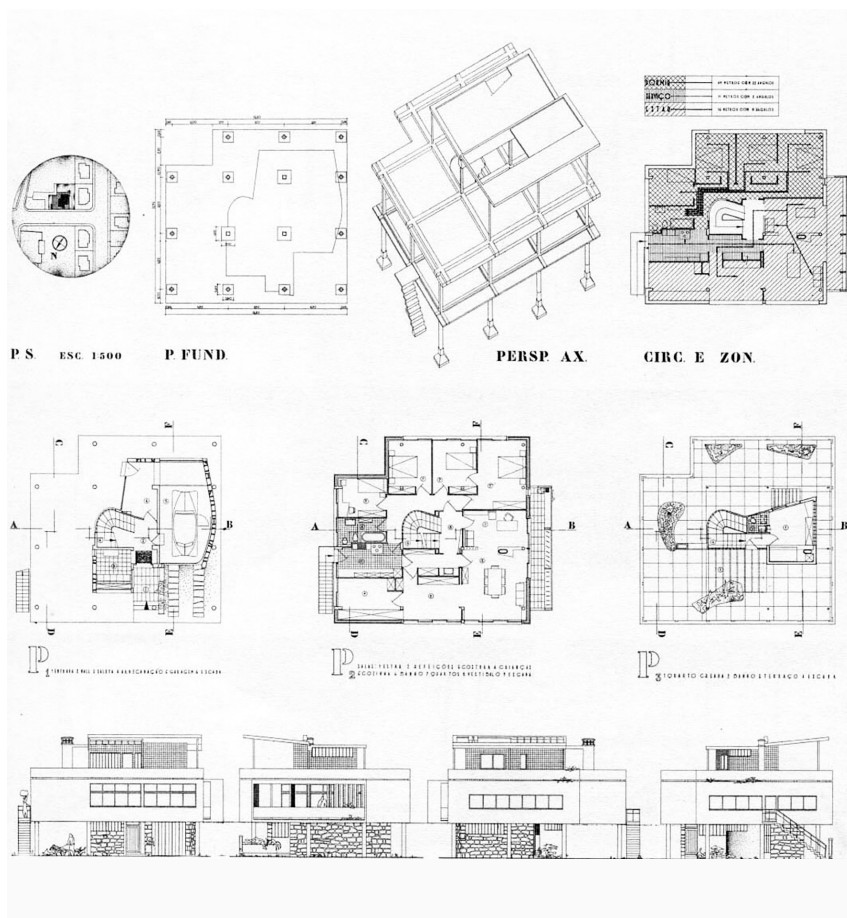
From 1947 onwards, "ODAM's Modern physiognomy", settled on reinforced concrete, is based on experimental studies of LNEC of large infrastructure constructions, partly because this material is used in the current building, close to the conventional and monolithic structure and in the absence of other material industries (such as steel or wood). But the reference of "*machine à habiter*" refers to plasticity contents more than strictly technical ones, justifying for ODAM the "purist" aesthetically, for, despite the propaganda done to reinforced concrete, as motivator of its form, in the end, its expression is independent of the identifying new technique of the constructive material. The mechanical component of the Modern architecture will be mediated from the proposal of Le Corbusier, where the new technological universe is embedded in the architectural expression but is not the ultimate goal.

The abstract, intellectual morphology of the new system and material is pressed into expressiveness densities "Mater", founded upon the themes of Unity, Function, Structure and Shape of the classic EBAP educational and transcribed to the five points of ODAM, as written by Oliveira Martins.¹¹ A tension is given by thickness to the Modern form of ODAM,

more real than the immaterial "purist" architectural "object", that emphasizes the expressive image of the new techniques and materials, as is recognized in the paradigmatic examples of the CODA Oliveira Martins of 1950 [figure 3] or in the *Edifício do Ouro* of Mario Bonito [figure 4].

Moreover, the construction thematic, the confrontation of the modern repertoire is evidenced within the differentiating expression of the program, the increase of substantive architectural valences, the apology to a technically advanced image and a preference for an industrial image. The industrial aesthetic is produced subtly by means of rudimentary elements, most of the time craft made (metallic ripped, broken—light wooden blinds, fixed grid, shed lights, etc.) used repeatedly generating complex texture shapes, such as the *brise-soleil* on the *Edifício de Ceuta* façade surface. This conception configures the precision of the detail as a rigorous controller between idea and its materiality and as a fundamental element in the plastic expression of the design project [figure 5].

In 1952, on ODAM's "object" scale, the differentiation with the central European models, stand out with less rigid forms, larger variety of materials, less strictly functionalist, more liberated, in search



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of a good integrator of design artisanship. The formal paradigms of Le Corbusier are transformed into a logical system that runs in search of more expressive forms of the exterior envelope and specially the coverage roof, but remains intrinsically a *universal* matrix based on the modular structure, morphological simplicity of single space, free, fluid and thought from the inside.

The scale of the city apprehended in the “*sun, space and greenery*,”⁴² has a strategy in ODAM, the replacing of the “garden city of rural purpose” imposed by the regime for the “park city” of urbanity for all. However, the bet is on the autonomous collective housing block in height, as a modular unit design of the “new city” or as an experimental prototype of habitat social condenser, particularly in new forms of accommodation and housing research of the *Unité d’habitation*, as is clarified in the typological research in *Edifício Praça do Império* of Pereira da Costa [figure 6] or in the *Edifício Parnaso* of José Loureiro [figures 7a, 7b].

Maturation of the Modern

After 1952 there is the period of acceptance and experience of the singular Porto identity where the

autonomy gained in the confidence of the acquired Modern experience is clear. The abstract purity of form is associated to a more humanized local identity and to a demand of valences previously relegated as “memory” and “instinct”. The gradual acceptance of the conditions of individual consciousness and of the regional context of architectural production visible in ODAM’s work “*Habitat rural, uma nova comunidade agrícola*”, (“Rural habitat, a new agricultural community”) presented by he group in the CIAM X in Dubrovnik, related to the new problems of the communities and the of city, predicts a future process that reverses the centrality of the debate to the specific cultural environment of ODAM. The preference for local materials and construction systems will be neutralized by the Modern experience that will set to the expression of traditional materials as modern plastic, a transition synthesized in 1956, on the paradigmatic House of Ofir by Fernando Távora [figure 8].

Conclusion

We may characterize the “Modern form of construction” of ODAM as an architecture of apparent resistance to innovation, by circumstance and

culture, but that integrates the valences of Modern rationality in obtaining efficient effects, managed by a strict instrumentality in the search of a functionality adjusted to specific experiences. ODAM, attentive to architectural experiments in European post war reconstruction and simultaneously to the emerging revision of Modern dogmas, reveals with more prominence the own crisis of European Modern architecture. ODAM guides progressively, from its constitution, the passage of the “programmatic” to the “empiric”, the claim of Modern uniform principles, to the development of diversity and, simultaneously, of a global and more axiomatic vision (theoretical) to a strictly professional viewpoint and hereafter, more individual. ODAM begins to solve this crisis with the actualization on architectural (re)invention of Modernity, more organic, more diversified and more committed to the content and meaning of the built.

Notes

1. FAUP, Architect degree (1991), Scholarship Investigator of FCT, DEA of the ETSAB (2000) and Ph.D in Architecture of Catalonia Polytechnical University (2006). Actually I&D projects investigator of CITAD and CEAU/FAUP. Since 1994 Professor of Architectural Project Design, Theory,



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Figure 3. Oliveira Martins, CODA, House for middle-class family, 1950, Porto, Portugal. Odam's dom-inó formal construction. Archive of FAUP.

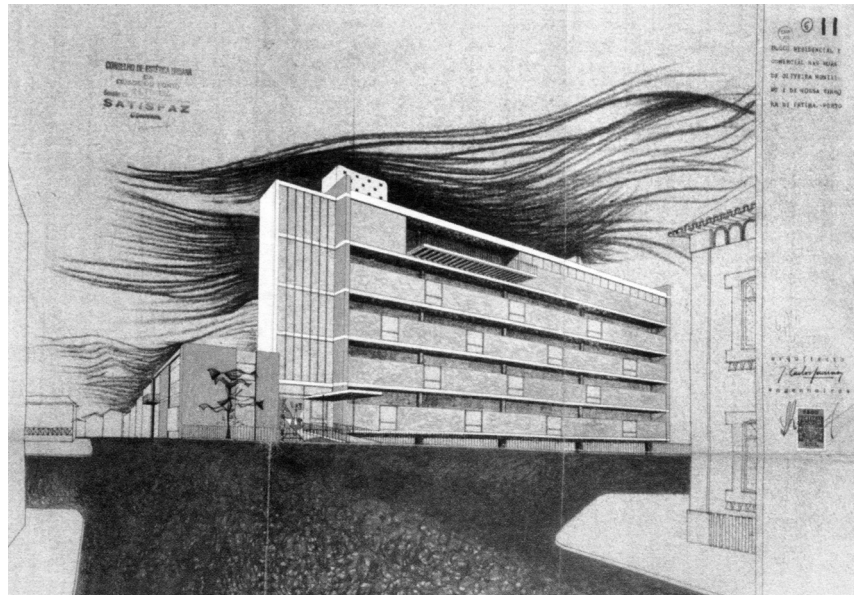
Figure 4. Mário Bonito and Rui Pimentel, *Edifício do Ouro*, Porto, Portugal, 1951. Photo by Edite M. F. Rosa.

Figure 5. Arménio Losa and Cassiano Barbosa, *Edifício de Ceuta*, Porto, Portugal, 1950. Photo by Edite M. F. Rosa.

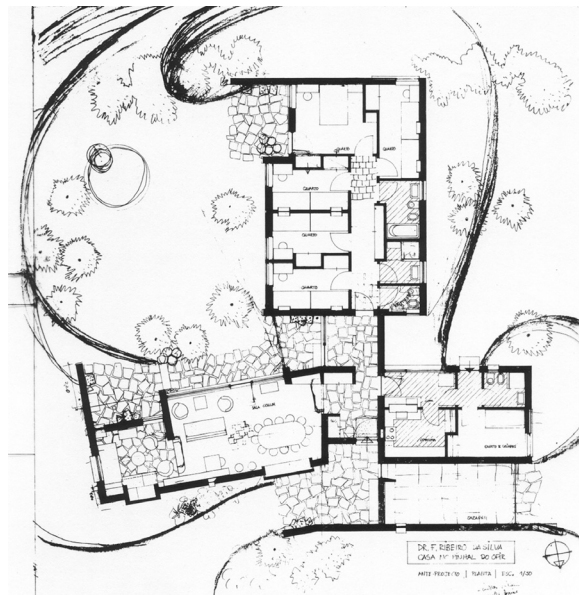
Figure 6. Pereira da Costa, *Edifício da Praça D. Afonso V*, 1953, Porto, Portugal. Photo by Edite M. F. Rosa.

Figures 7a, 7b. José Carlos Loureiro, *Edifício Parnaso*, 1954, Porto, Portugal. Photo by Edite M. F. Rosa.

Figure 8. Fernando Távora, *Casa de Ofir*, 1956, Ofir, Portugal. Archive of Fernando Távora.



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and Thesis at FAULP. She works in several public and private projects with Álvaro Siza since 1991 and in her own studio, er&ja arq, since 1997.

2. Barbosa, Cassiano (Compilation) Odam: *Organização dos Arquitectos Modernos do Porto, 1947-1952*, Porto, Edições ASA, 1972.
3. Acronym used with double reading, *Organização Dos Arquitectos Modernos* or *Organização em Defesa de uma Arquitectura Moderna*.
4. Távora, Fernando, "*O Problema da Casa Portuguesa*", Porto, Cadernos de Arquitectura, 1947. Published initially in the weekly journal *ALÉO* (10 de Novembro 1945). Enlarged later, in 1947, to 16 pages, by the demonstrated interest of the class of architects.
5. Tostões, Ana, *Os Verdes anos da arquitectura portuguesa dos anos 50*, 2ª ed, Porto, FAUP publicações, 1994.
6. From the first generation we highlighted, Arménio Losa e Cassiano Barbosa, Artur De Andrade, Alfredo Viana De Lima and Agostinho Ricca. Some linked to teaching, A.Losa, in 1945 and Agostinho Ricca in 1951. Of the second generation we highlight, Luís José Oliveira Martins, João Andresen, Adalberto Dias, Eduardo Matos and future teachers of EBAP such as Mário Bonito, Fernando Távora, José Carlos Loureiro, Delfim Fernandes Amorim. Of the third generation we highlight, António Matos Veloso, Fernando Eurico, António Corte Real, Octávio Lixa Filgueiras, Pereira Da Costa and João Tinoco.
7. CODA, *Concurso de Obtenção do diploma de Arquitecto*. Contest for obtaining the diploma of Architect. Proof realized normally some years after the end of the course,

during activity, constitutes an evaluation of a real project in order for the recognition of the capacity of exercise of the professional practice.

8. S/A "*Inspirada lição de arquitectura moderna*", *Arquitectura: Revista de Arte e Construção*, 2ª série, ano XXII, nº 19.
9. Barbosa, Cassiano (Compilation) Odam: *Organização dos Arquitectos Modernos do Porto, 1947-1952* Porto, Edições ASA, 1972, 16.
10. Veloso, António Matos "*Habitação rural e urbanismo*", Odam: *Organização dos Arquitectos Modernos do Porto, 1947-1952*, Porto, Edições ASA, 1972, 56.
11. Martins, Oliveira "*A Arquitectura de hoje e as suas relações com o urbanismo*", Odam: *Organização dos Arquitectos Modernos, 1947-1952*, 83.
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S/A "*I Congresso Nacional de Arquitectura: Conclusões e votos*", *Arquitectura: Revista de Arte e Construção*, 2ª série, ano XXII, nº 29 (Feb./Mar.1949).

S/A "*Tese ao X Congresso do CIAM, Arq. Viana de Lima, Fernando Távora e Octávio Lixa Filgueiras*", *Arquitectura: Revista de Arte e Construção*, nº 64 (Jan. /Feb.1959).

Svetlovodsk: Realized Urban Utopia of the USSR. A Revitalization Strategy for the Small Post-Soviet Monocity

By Vladislav Tyminski¹ and Anna Kamyshan

The article is devoted to one of the most pressing problems for the former Soviet Union—the problem of survival and development of the small mono-industry towns. The aim of this work is the actualization of the problem of survival and development of the small post-Soviet towns—the unique urban artifacts of the Soviet industrial utopia. Svetlovodsk that was created in the 60's of the twentieth century during 'Khrushchev's Thaw' gave the example for the analysis of the specificity of small towns in Ukraine. The strategy of the development of this type of towns has been described in the article.

As the Modern society is becoming increasingly predetermined by information and communication technologies, artistic practice is often reduced to a phenomenon called "counter-industry" by M. Horkheimer and T. Adorno, which is connected with total globalization and "post-capitalization of social reality". In this situation architecture has transformed into an instrument for fragmentation of urban environment by means of turning a city into a field of representation of individual economic and political aspirations on the background of glob-

al popular trends. What is more, social potential and ethical role of architectural and urban planning solutions are not often taken into consideration.

One of the most urgent issues at the moment is the necessity to work out conceptual and theoretical strategies of Modern cities development, taking into consideration their specific and typological features.

Development of small towns is one of the most challenging problems for most post-Soviet countries. This topic has been tackled by outstanding Russian and Ukrainian scholars and urbanists,

including Professor V. Glazychev and Professor A. Bouryak, whose works have become an important theoretical and practical contribution into the ongoing research into this issue.

A mono-profile city (monocity) is a populated area, where the entire economic activity is closely connected with the only enterprise or a group of integrated enterprises. This enterprise (or a group of enterprises) is referred to as a city-forming enterprise. In many monocities city-forming enterprises were related to military industry. Therefore, those monocities had the status of administrative territories with limited access.

With the collapse of the Soviet Union, city-forming enterprises in a lot of monocities experienced deep economic crisis which entailed unfavourable social situation, causing the rise of unemployment in the first place.

Similar transformations befell Svetlovodsk. This town appeared after the Kremenchug Hydroelectric Power Plant had been built [figure 1]. The USSR's policy of the 60s (the period of "the cold war" with the USA) called for new megaprojects intended to demonstrate the scientific and technological might of the USSR. This came as a premise for the creation of the enormous water reserve at the Kremenchug Power Plant, now the biggest water reserve on the territory of Modern Ukraine. People who used to live on the flooded territory were relocated to a newly-created settlement called Khrushchev. In 1962 it was renamed Kremges, and in 1969 the town received its contemporary name—Svetlovodsk.

Throughout the whole Soviet period the town was undergoing the process of intensive urbanization. Major industrial estates emerged in the west-



Figure 1. Kremenchug Hydroelectric Power Plant, Svetlovodsk, October 2, 1959.

Photo from "Інтернет-видання Світловодськ" <http://svetlovodsk.com.ua>.

Figure 2. The drawing of the view of Svetlovodsk of 1961. Photo from the author from the town's museum, November 23, 2011.

Figure 3. Architect unknown (typical project), "The Pure Metals Plant", Svetlovodsk, built in the 60s. Recent image. Photo from the author, February 14, 2012.

Figure 4. Urban development strategy components. Diagram made by the author, April 11, 2012.

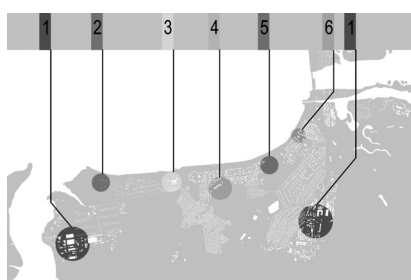
Figure 5. The concept of Svetlovodsk's museum—the part of cultural and educational complex. Visualization made by the author, May 7, 2012.



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ern and eastern areas of Svetlovodsk, thus forming the economic base of the town. Together with new enterprises there appeared housing estates and public buildings.

The development of the city evolved in accordance with the comprehensive plan which had been elaborated together with the key structures of the hydroelectric complex back in 1954. The main liv-

ing quarters of the town were located along the Kremenchug water reserve on the high forested Taburishchansky cape. The green grove together with the immense mirror-like surface of the man-made sea makes up picturesque scenery. The rectangular street grid of Svetlovodsk follows the topography and forms the architectural structure of the town [figure 2].

As the Soviet Union collapsed, Svetlovodsk saw a deep economic, social and cultural crisis, caused by the need for urgent adaptation to the specific character of emerging market economy and new social and cultural values that replaced the Soviet ideology. Numerous citizens had to leave the town in order to make their living.

The rupture of economic and political ties, which

had dominated throughout the Soviet time, brought forward the decline of Svetlovodsk's industry, mostly oriented towards the military sector of economy. The end of the socialistic utopia in 1991 stopped the intensive construction of gigantic plants in the newly-created industrial districts of the town (Revovka, Taburishche). Among them there were such enterprises as "The Pure Metals Plant" [figure 3], "Calculator Plant" and "Reinforced Concrete Products Plant". Built in the 60s and early 70s of the 20th century, in the period of rehabilitation of the Soviet avant-garde of the 20s, the plants of Svetlovodsk are valuable architectural monuments of the Soviet industrial age in its prime. Being large-scale architectural landmarks in the urban structure of this small town, the gigantic plants are now in decline. Most of them are towering over the cityscape, with their abandoned buildings resembling the skeletons of enormous extinct animals.

Taking into consideration the immense scale of these industrial enterprises, as well as their satisfactory technical condition and their cultural significance as artifacts of the Soviet architecture of the 60s, it seems rather timely and prospective to try to renovate these plants and adapt them to Modern economic reality. Renovation of Svetlovodsk's industrial enterprises can facilitate the search for new strategies of the development of the entire town.

Thus, the suggested analytical and design work addresses the alarming problem of small monoprofile post-Soviet towns on the example of Svetlovodsk. This paper represents an attempt to work out promising approaches for the solution of this problem and to suggest possible development strategies of similar monocities taking into account their specific features.

The analytical study of the town structure, added by the interview with representatives of local initiative groups, made it possible to outline the following major problems of Svetlovodsk:

- limited landscape and spatial resources of the territory
- disused green areas are turning into abandoned wasteland, their ecological and recreational capacity being untapped
- due to topography, Svetlovodsk is divided into two parts: low-lying areas and the hill
- Svetlovodsk stretches along the coastline of the water reserve, while other structural elements of the town have insufficient functional saturation
- there is only one highway that connects the town with the rest of the region
- most industrial estates are abandoned (about 74%), turning into depressive territories

The analytical study of the main problems of the

town and the existing solutions to the problem of small monocities survival and development brings forward the strategy of Svetlovodsk's further development as a service centre—the node that would accumulate various processes in the region and provide necessary services to the areas lying within its social and economic influence. As Svetlovodsk is surrounded mainly by villages and small urbanized settlements, the agricultural sector can naturally act as the main possible consumer of the services provided by the town. Thus, orientation towards agricultural needs can become a new strategic vector of the town. In this respect, we have analyzed the existing ties between Svetlovodsk and the region and singled out the following main city-forming nodes of the strategy [figure 4]:

- rehabilitation of industrial enterprises, installation of eco-friendly technologies and retrofitting to suit the new demands of the market
- development of the existing recreational and tourist capacity
- creation of a multi-functional agricultural service centre
- expansion of the existing regional hospital which can later grow into a major medical centre
- creating a public core in the centre of Svetlovodsk, by means of building a cultural and educational hub with agricultural orientation [figure 5]
- due maintenance of the embankment walking area

Functional zoning of the town with due account of sustainability issues is another burning problem of Svetlovodsk.

The suggested strategy of the town development provides for differentiation and intensification of agricultural and urban processes, which are now chaotically interwoven, by means of their concentration in buffer nodes. One these buffer nodes can be created on the basis of the renovated "Calculator Plant" which can be retrofitted into a multi-functional agricultural service centre attracting people from the surrounding rural areas. Creating such nodes is one of the key points of the strategy promising the economic rise of the town and expanding the sphere of its potential influence.

The problem of small post-Soviet monocities requires comprehensive multidisciplinary approach. The present paper devoted to the research of small town potential and development strategy on the example of Svetlovodsk represents an attempt to highlight this issue because of its relevance not only for Ukraine, but also for the majority of post-Soviet countries. This problem can only be solved if local initiative groups pull their effort and the European

Union provides its support, since sustainable social and economic development of small post-Soviet towns is an integral part of the whole European urban space.

Notes

1. Vladislav Tyminski graduated at the Kharkov National University of Civil Engineering and Architecture in 2011. He is the author of five research articles and participant of three international conferences. A theme of his current research is the urban strategies of the development of small post-Soviet cities, on which his diploma work was based.

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Heritage in Danger

By Ivan Blasi

MODERN heritage is still at risk although huge steps have been made to protect it and deal with it since **docomomo** was created. In the last months **docomomo** International has supported several campaigns to protect buildings which are part of Chapters' Registers. In some cases the support of international institutions has allowed all those people involved in the different processes to recall on the importance of the projects and their future use. Following are some of these projects which are still in risk.

Factory Kitchen, Samara, 1931 by Ekaterina Maksimova

The Maslennikov factory canteen, also known as the *Fabrika Kukhnya* or Factory Kitchen, was canteen producing meals on industrial scale, a vital typology for the early Soviet urbanism.

By providing inexpensive and healthy food, they aimed to free people, especially women, from 'domestic slavery' and to give them more time for education and other forms of personal development, and, at the same time, to foster the spirit of collectivism. Every new residential area was supposed to have a factory-kitchen, and they were usually prominently placed and have expressive architecture. Sometimes they were municipal, and sometimes they belonged to a factory.

Factory Kitchen in Samara belonged to the

Maslennikov Factory. The building is absolutely unique in its plan in the shape of a hummer-and-cycle, symbol of the union of the working people. The 'hummer' held the kitchen and storage, and the 'cycle' was occupied by dinner-halls.

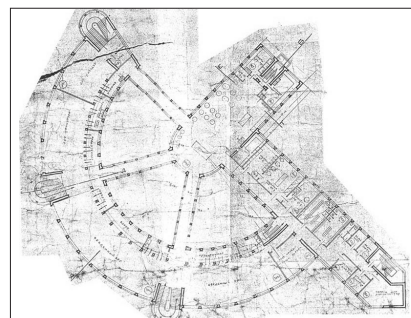
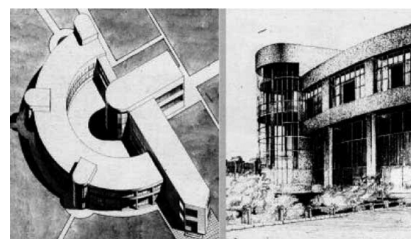
The architect, Ekaterina Maksimova, was a VKHUTEMAS graduate and one of the very few women architects of the time.

The building underwent a number of transformations, but still retains its characteristic shape and can be restored. More than once it was under the threat of demolition, and now its future is unclear. Local activists for many years led a campaign to preserve the factory-kitchen building. Among their supporters are the Union of Architects of Russia,

the State Museum of Architecture (MUAR), and well-known experts. The site was visited by delegations of SAVE Europe's Heritage and Moscow Architecture Preservation Society (MAPS); the visit resulted in publications in the international press and petitions to save the building. It was spared the demolition, but still is not protected by the preservation law, and its condition continues to deteriorate. Official application by a certified expert stating that the building should be listed as a cultural heritage site was ignored by the Samara Ministry of Culture. Today, the owner of the buildings intends to demolish it and built a multistory commercial centre on its place.

Vladimir Shukhov, **docomomo** Russia Chair
Anna Bronovitskaya, **docomomo** Russia Secretary General

docomomo International signed the petition and wrote letters to the Governor of Samara and to the senator from Samara urging them to take measures for the listing and preservation of the Factory Kitchen.



Sandoz Headquarters

Office Complex Novartis, Rueil-Malmaison, 1962-1968

by Martin Burckhardt and
Bernard-Henri Zehrffuss



Agnès Cailliau, Chair of **docomomo** France alerted **docomomo** International that the original Headquarters and Laboratories of Sandoz were going to be completely demolished. After writing letters to the Mayor of Rueil-Malmaison and to Novartis's President, the pharmaceutical company answered that their previous Basel intervention was an example of their care for heritage, that the structure of the building in Rueil-Malmaison had not aged well and did not live up to the company's standards and that the project of architect Patrick Berger was in line with their heritage policy.

The campaign continues with the support of many people such as Francis Rambert, Pierre-Antoine Gatier, Rudy Riciotti, or Dominique Perrault.

Upon the decision to build the new French headquarters of Sandoz, the company expected a tertiary architecture at the forefront of Modernity to echo the image of a prestigious company on a protected landscape site. The Sandoz family believed that Modern architecture would serve the project after Jean Tschumi (1904-1962) had designed the

Sandoz laboratories in Orleans (1949-1953) and Martin Burckhardt had made the Basel headquarters.

The project had to respond to a request for 12,000 m² of offices, laboratories, meeting rooms, a restaurant and a cafeteria. The selected site was the former estate of the Richelieu Park and, in order to respect height constraints and preserve the harmony of the wooded area, a rather low building (4 floors) was proposed and built upon a two level basement. It is in perfect harmony that Burckhardt and Zehrffuss worked together between 1965 and 1968 to meet the constraints of the site punctuated by ponds, to set up a composition of low buildings leaving the park open by following the access boulevard. The main pond dictated the fragmentation of the program into three entities. In a game of transparencies and reflections, the main building articulated the axis towards the restaurant landscape and a functional axis towards the laboratories. We must now admit that these very constraints due to the location of the project in a rare site are at the origin of the remarkable series we admire today. Bernard Zehrffuss pointed out "the whole point of the proj-

ect was to maintain the spirit of the park and build around the lake, knowing that the Swiss are wonderful people who have such a respect for nature",

While Burckhardt said "In Rueil, we found nothing but positive opportunities, a wonderful park with its ponds and old trees, a customer who wanted a neat group of buildings, a high-class Parisian colleague, Zehrffuss, Premier Grand Prix de Rome."

In the fall of 2010, the Regional Directorate of Cultural Affairs (DRAC) Ile de France sought advice from Christine Desmoulins—a historian and author of a thesis and a book on the work of the architect Zehrffuss because the main building overlooking the boulevard de Richelieu was highly threatened. The principle of demolition seemed to have already been accepted by the municipality late 2010, although the DRAC was then consulted. A review of the PLU was then announced in order to densify the site. This decision seems unrealistic when one considers the Richelieu domain fortunately protected by its historical monument status.

The owner cunningly chose a famous, undisputed architect, Patrick Berger, to build the new building, a formidable technique to modify or remove buildings of high quality while not being blamed for that.



Kyoto Kaikan, Kyoto, 1960 by Kunio Mayekawa

In the historic city of Kyoto, located inside Okazaki Park across from the Heian Jingu Shinto shrines, sits a representative Modern architectural heritage, Kyoto Kaikan.

However, today, it faces an imminent threat of destructive alteration, thus calling attention for the Heritage Alert at the ICOMOS ISC20C.

Kyoto Kaikan is a multi-purpose cultural complex accommodating a concert hall, a theater and an international convention center. The complex was conceived as an edifice symbolizing the post-war reconstruction in Kyoto. It was built in 1960 and was designed by Kunio Mayekawa, a renowned vanguard architect who apprenticed under Le Corbusier in Paris from 1928 to 1930 as the first Japanese architect to do so. Without any doubt

Kyoto Kaikan has been one of the most outstanding Modern buildings in

Japan. As such it was awarded in 1960, its inaugurating year, the Architectural Institute of Japan Annual Prize, and more recently in 2003, it was registered as part of the

docomomo Japan list of significant Modern heritage buildings.

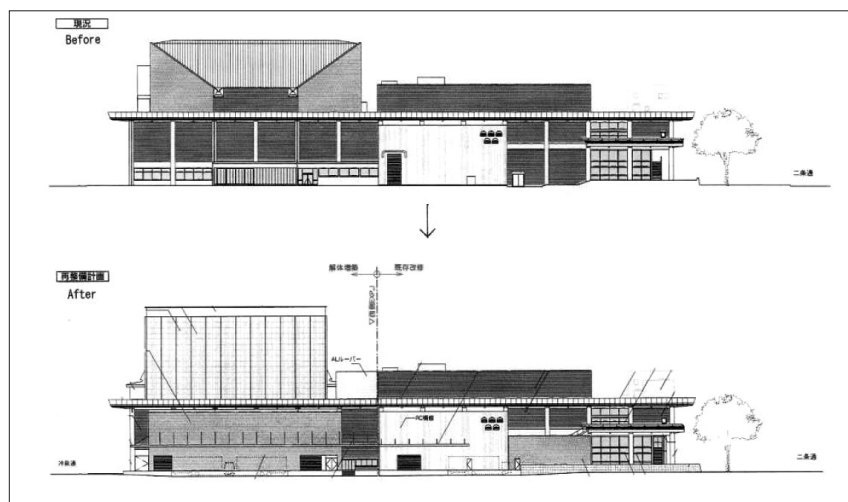
Kyoto Kaikan was designed to be harmonious with its context that provided a rich concoction of natural as well as man-made 'historic' environment. It was laid out to form a courtyard embodying the adjacent Kyoto Municipal Museum of Art Annex by asserting a strip of oversized and deep concrete eaves-in loose reference to the traditional Japanese wooden construction design-to bind it

horizontally. The exterior walls made of large size bricks and the pilotis as a sifting device moderated between the outer city and the inner spatial realm. Accordingly, Mayekawa created an architectural complex that convincingly reflected the design fundamentals of the Modern Movement while simultaneously making it fit with the historic traditional context of the Kyoto cityscape.

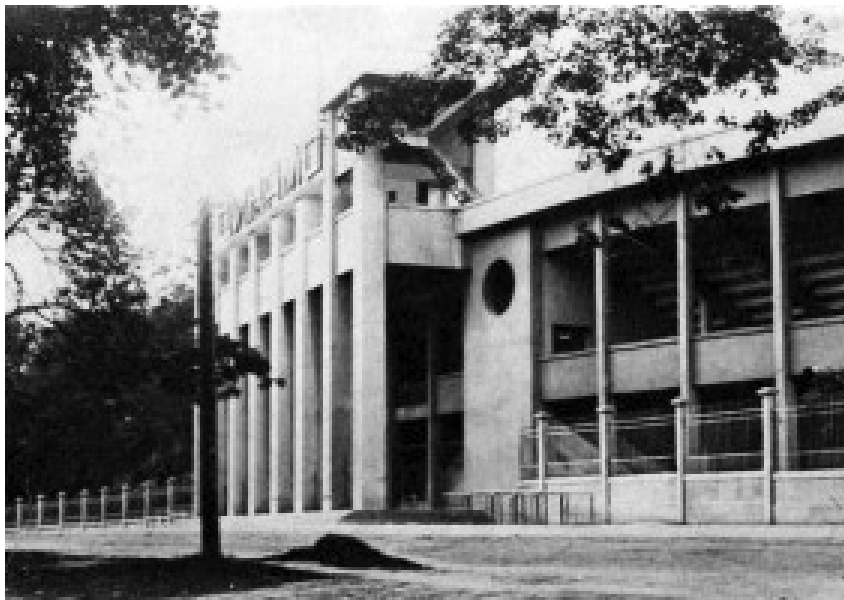
In June 2011, the City of Kyoto, the owner of Kyoto Kaikan, announced abruptly its plan to demolish more than a half of the complex in order to build in its place a new theater with a stage height that exceeds 30 meters. If the plan is allowed to proceed as announced, the authenticity of the complex would be categorically lost. Moreover, an emergence of massive volume done in a factory or plant like stage/theater structure would be certain to cause discord with the specific surrounding 'historic' traditional context that Mayekawa had so endearingly accorded in his design. The loss of Kyoto Kaikan would forebode the deprivation of the built environment permeating Kyoto with a rich assortment of cultural endowment.

Hiroshi Matsukuma,

docomomo Japan Vice Chair



Dinamo Stadium, Moscow, 1927-1936 by Aleksandr Langman and Leonid Cherikover



The following letter was sent to the Mayor of Moscow by Anna Bronovitskaya, Secretary General of **docomomo** Russia, with the support of Docomomo International:

On February 10, 2012 the demolition of the façade walls of the cultural heritage building of regional significance Dinamo Stadium got underway (*Leningrandsky Prospekt*, 36). There is no need to prove the value of the building which was constructed in two stages in 1927-1936 upon the project of L. Cherikover and A. Langman. In 1987 the Stadium was placed under special protection of the state.



However, it is worth noting that after the demolition of the Kirov Stadium in St. Petersburg in 2007, Dinamo Stadium remains the last large-scale sports structure of the 1920-1930s, and it needs a special solicitous attitude.

When and on what grounds was the status of cultural heritage building of regional significance changed for "capital construction object" within the bounds of "place of interest"?

Such definitions are provided in Appendixes to Government Decree of the City of Moscow dated January 25, 2012 #314 "On the area boundaries acknowledgement of cultural heritage object of regional significance Dinamo Stadium, 1928, by architect L. Cherikover" and in the Government Decree of the City of Moscow #15-PP "On the confirmation of land use provisions and city-planning regulations on the territory of cultural heritage object (place of interest) of regional significance Dinamo Stadium, 1928, by architect L. Cherikover", where it is written about "demolition of southern, northern, eastern parts of the building."

In published sources there is no information on any act of state historical/cultural expert assessment and no administrative document which change the status of Dinamo Stadium to "place of interest".

It is doubtless that the FIFA World Football Cup which will take place in Moscow in 2018 is an important event. But it cannot serve as the basis for destruction of the heritage as a way to keep the memory of the time when football had its highest uplift in Russia. Inconformity of the Stadium's facilities with FIFA standards indicates that it should not be used for holding high-status matches but that it should be operated and maintained as one of the city sports and cultural grounds which are in great demand today.

The demolition which is underway now brings into discredit the very idea of heritage conservation. In order to satisfy investors' needs the significant monument and the surrounding park which are the objects of public domain are being sacrificed. This demolition will be a great loss for the city and an offence to its residents. One must also think about the injury to the extranational reputation of Russia which can be caused by this uncivilized handling with the social heritage. We strongly urge you to look into the situation and take undelayed action to stop the demolition.

Anna Bronovitskaya

docomomo Russia Secretary General

Ricardo Legorreta

An Architect in Search of Modernity Within Tradition

By Louise Noelle

Ricardo Legorreta is one of the Mexican contemporary architects who have garnered the most recognition; only in 2011 he was distinguished as *Doctor Honoris Causa* by the *Universidad Nacional Autónoma de México*, UNAM, and the *Praemium Imperiale* in Japan. One year before, on August 27 at the **docomomo** Conference held in Mexico City, he gave a memorable Keynote Speech on the main figures of the Modern Movement in Mexico, José Villagrán and Luis Barragán, that the attendants treasured in their memories.

He was born in Mexico City on May 7, 1931, and he studied architecture precisely at the UNAM; he started his professional life working with José Villagrán García, who is considered to be the pioneer of Mexican Modern architecture, and eventually became his partner between 1955 and 1960. His work stemmed from the analysis and comprehension of the values of architecture and the mastery of technique, as well as from the Mexican roots and traditions, drawing near Luis Barragán's proposals. His first personal expression can be seen fully at the Hotel Camino Real in Mexico City (1968), a building that combines an intimate nature with the complex needs of the hotel industry, a genre where he had several successful examples. The main characteristics of his style are shown in a privileged way of using a wall, which enable him to use light sparingly and fitly. The exterior result is of marked and powerful volumes, with a horizontal tendency that protects generous internal spaces, kind and welcoming, with a constant feeling of belonging to the local.

His vast and varied architectural production was developed starting in 1963 where he headed Legorreta Arquitectos,¹ where in the last two decades the works related to culture and education had an important place; in these instances he looked not only for an

adequate urban presence of the buildings but for a solution to the specific requirements that go beyond the technical settings. We are talking about complex problems such as the ones presented by libraries and the relentless growth of their archives, like in the libraries of: *Universidad Autónoma de Nuevo León* (1994) in Monterrey and the *Centro Nacional de las Artes* in Mexico City (1994); the Central Library, in San Antonio, Texas (1995), and the one in Chula Vista, in California (1995).

Regarding institutions of higher education, his designs considered the contemporary means of transmitting knowledge, without leaving behind the quality of student interactions; we can witness this at the *Instituto Tecnológico de Estudios Superiores* in Monterrey, ITESM, with the Graduated School of Business (2001) and the campus "Santa Fe" in Mexico City (2009), as well as the Graduated School of Economy at the UNAM (2010). In the United States he carried out the Schwab Residential Centre at Stanford University (1997), the Max Palevsky Residence Hall at the University of Chicago (2001) and the Community Centre of UCSF in San Francisco (2005). In the Middle East he designed for the Qatar University at Doha, the Texas A&M Engineering College (2007) and the Carnegie Mellon College of Business and Computer Science (2009), as well as the Student Housing and the Campus centre at the American University in El Cairo (2009).

Finally, the museums and exhibition rooms, in various shapes and forms, where part of the challenges he accepted, starting with the Children's Discovery Museum (1989) and the Technological Museum of Innovation (1998) in San José California. In the new century he designed: the *Pabellón de México* (2000) at the Expo-Hannover in Germany; the Museum for Zandra Rhodes in London (2001); the Art Museum of South Texas in Corpus Christi (2006); the *Museo Laberinto de las Ciencias y las Artes* in San Luis Potosí (2008); and the Museum of Science and History at Fort Worth (2010).

With the death of Ricardo Legorreta on December 30, 2011, contemporary architecture has lost one of its main actors and **docomomo** a trusted friend.

1. First he established a society with Noé Castro and Carlos Vargas, which was transformed in 2000 as Legorreta + Legorreta, with Víctor Legorreta, Noé Castro, Carlos Vargas, Adriana Ciclik and Miguel Almaraz



What “Rights” for 20th Century Monuments ?

A troublesome topic for a Meeting at the *Accademia di Architettura* in Mendrisio

By Roberta Grignolo **docomomo** Switzerland, vice chair



The final round table of the international study days “*Diritto e salvaguardia dell’architettura del XX secolo / Law and the Preservation of 20th Century Architecture*”, June 18–19, 2012. From left to right: **Bruno Reichlin**, **Ana Tostões**, **Roberta Grignolo**, **Marco Borghi**.

The protection of 20th century architecture has by now become a fully-fledged part of the discipline of preservation, and even the heritage of the second post-war period is increasingly recognised as worthy of conservation. Nonetheless, in practice, this cultural awareness still clashes with the difficulties attached to adapting buildings to present day regulations. Even when intervening on buildings that are officially recognized as “monuments”, from one country to another and even from one region to another in the same country, there is great variety in how dispensations from applicable regulations are allowed.

This is what led to the idea of a supranational forum for a comparison of customs and practices associated with the “rights of monuments”. The International Study Days on “Law and the preservation of 20th century architecture”, organised by Roberta Grignolo and Bruno Reichlin, were held at the *Accademia di Architettura in Mendrisio* (*Università della Svizzera Italiana*), on June 18 and 19, 2012 as part of the interfaculty research project “Critical Encyclopaedia for the Restoration and Reuse of 20th Century Architecture”.

The intent of the meeting organisers was to

gather around a table not only architects and engineers engaged in 20th century preservation (familiar participants in 20th century heritage meetings), but legal experts and lawyers too, specialised technical practitioners, as well as representatives of architects and of national and international preservation institutions.

As the preparatory discussions revealed, the topic of the meeting immediately aroused great interest because of its focus on “issues no one wants to deal with”. The top echelons of **docomomo** International and the Legal Office of the Swiss Society of Engineers and Architects (SIA) chose to sponsor the initiative and take an active part in the organisation of the conference.

One might rightly question as to whether, in dealing with the issue of how law and heritage are related, it was appropriate to limit the scope of the debate to 20th century monuments alone.

We believe that, in discussing laws, standards and regulations, there is no substantial difference in how they are applied to 20th century architectural heritage as opposed to the heritage of previous centuries.

Legal provisions applicable to monuments are

applied equally to all heritage buildings, regardless of their period. But this, possibly, is one of the most sensitive issues.

The heritage of the 20th century exhibits specific features that cannot be disregarded when authorities require that compliance measures be applied.

Firstly, compared to architecture from previous centuries, 20th century buildings present greater complexity in many areas. Suffice it to think of high-rise buildings, of large residential complexes (e.g. Le Corbusier’s *Unités d’Habitation*), of the variety of building types that modern civilisation has developed to accommodate large numbers of people or public flows (entertainment facilities like theatres or stadiums, and infrastructure hubs like airports and railway stations). In addition, some of the intrinsic features of recent architecture also require consideration: the spatial complexity, one of the drivers in 20th century architectural research (think of the spatial continuity which marks many 30s and 50s masterpieces), and the poor thermal inertia of 20th century envelopes, which is an issue in improving energy efficiency.

A second good reason for focusing on the last century when debating the issue of how law and heritage are related, is the fact that, compared to the revered architecture of previous centuries, it is far more difficult to defend recent architectural works against the demands of compliance authorities in fields like safety, seismic risk, etc.

It should be added that the temporal, formal and technical proximity of the last century’s heritage to contemporary architecture, frequently induces compliance authorities to expect that 20th century buildings be brought up to the standards applied to new buildings (this is especially true with respect to energy efficiency and systems).

There are different levels at which legal issues can affect interventions on existing buildings, and this was taken into account by the structure of the meeting.

The first level concerns the types of instruments available to protect and list heritage buildings.

Protection exists in differing degrees according to the country being considered (in the UK buildings can be listed “grade I”, “grade II*” or “grade II”; in France one finds “*bâtiments classés*” or “*inscrits*”; etc.) and the efficacy of listing provisions also varies from country to country (in France, protection covers building exteriors, interiors and proximal surroundings; in the Netherlands and Norway protection only applies to building exteriors, unless otherwise specified in the listing document; in the UK instead, listing applies to the whole building and all its contents at the time the listing becomes effective, regardless of actual or alleged authentic-

ity). The above differences reveal the diversity of national cultures where preservation is concerned, and at the same time they also influence national heritage culture.

The duration of protection may also vary: in some American states, officially recognised monuments enjoy protection in perpetuity, while in many European countries listed buildings may, in some cases, be “de-listed” or “de-classified”, without any cultural explanation.

Moreover, heritage legislation may also have economic consequences with respect to eligibility for preservation work financing and funding, as well as tax facilitations or incentives, etc.

The meeting also addressed a further instrument for the protection of 20th century heritage: authors’ rights. This set of laws was created to protect works produced by human creativity from subsequent changes, and it can be enforced for the preservation of outstanding 20th century architectural work. A point in case is the Flaminio stadium in Rome, designed by Pier Luigi Nervi between 1956 and 1958. Extensive restructuring work had been envisaged to turn it into the city’s main rugby stadium. Action taken by the engineer-author’s heirs led to a confrontation between the relevant authorities and the transformation project was abandoned.

In other cases, however, the issue of authors’ rights may prove to be double edged. The *Olympiapark* in Munich, designed for the 1972 Olympics by Günter Behnisch was listed in 1998. When the municipality and the managing company decided to erect new buildings within the original complex, Behnisch asserted his author’s rights to avoid having someone else modify the complex. However, the alternative project he submitted envisaged such extensive alterations that the local heritage authorities had to step in to avoid disruptions of the original complex.

The above issues are some examples of the topics discussed during the first session of the meeting.

Regulatory compliance is another level at which legal issues may affect interventions on existing buildings, and this was the focus of the discussion for the remaining sessions of the study days.

In intervening on a heritage building, architects must ensure that the building complies with current planning regulations and in particular with provisions relating to fire safety, the elimination of architectural barriers, public safety, the safety of staff and maintenance personnel, seismic safety, and lastly sustainability and energy efficiency.

In cases of legally recognised “monuments”, applications can be presented to obtain dispensations. These are equivalent safety solutions which have a lower impact on a building that is considered to be

of public interest. The term dispensation, however, often seems to imply an attempt to find loopholes to avoid problems, and this is why one often speaks of the conflict between cultural and safety interests when heritage is at stake. It actually is more a matter of different facets of one and the same issue: the overall public interest.

Furthermore, as already stated, obtaining dispensations varies greatly from one country to another and even within the same country. Additionally, compliance or habitability certification authorities appear to enjoy varying degrees of freedom: in some cases a dialogue-negotiation process is possible (or even required) between the architects and the relevant authorities, in other cases such dialogue is practically non-existent.

To provide the audience with a better understanding of the legal notions involved, several experts discussed the issues of dispensation and equivalent safety, illustrating how they are implemented and providing replies to questions such as: Can one refer to common sense (the kitchen recipe notion of “as required” or “*quanto basta*”) in adapting buildings to existing regulations? In the case of buildings for which the probability of certain types of accident is minimal (e.g. a fire breaking out where there is nothing combustible), how can one require that the principle of proportionality be applied to the actual risk and to the required compliance interventions?

Another key issue is accident liability: in most legal systems it lies with the owner. In the event of the owner being a private citizen, it will not be in his best interest to seek dispensations from existing rules and regulations, hence the paradox of owners being less willing than compliance authorities, to accept equivalent safety solutions.

Following the overview of theoretical issues and key legal notions during the first day of the meeting, the second day focused entirely on practice.

Experts and technical practitioners from several countries presented their national rules and regulations for fire safety, accessibility, seismic safety, securing hazardous materials and compliance with energy standards. The goal of the session was to discover common practices and their underlying principles, from which generalisations can be more easily drawn.

During the last session the floor was handed over to practitioners: architects from a variety of countries, each with his or her extensive experience in the field of recent heritage. They presented cases of heritage interventions in which regulations played an important role in defining the solutions that were then implemented. The cases included, among others: Wilhelm Marinus Dudok’s *Collège Neerlandais* (1927) in the *Cité Universitaire* in Paris, where fire

compliance in the auditorium was achieved by expanding the compartmentalisation area to a point in which the fire doors could not disrupt the original material elements and spatial perception; Alvar Aalto’s House of Culture in Helsinki (1955–58), where the original wooden fire doors were preserved and merely coated with intumescent paint; Vantaa City Hall (1957), where the parapets were restored to their original state—despite their non-compliance—thanks to the argument that the building is only used during the day and that it is not attended by children; Scharoun’s *Geschwister-Scholl-Gesamtschule* in Lünen (1956–62), where a fragmentation of the interior space of the hall, with its almost urban features, was avoided by compartmentalising only the upper part of the staircases to the first floor; Haefeli, Moser and Steiger’s *Kongresshaus* in Zurich (1936–39), where the spatial continuity between areas located on different levels still remains an unresolved fire safety issue.

The contributions presented during the study days testify to the great diversity of heritage provisions and approaches from one country to another. The meetings are in no way intended to provide ready recipes for regulatory compliance procedures, nonetheless, it was clear to all meeting attendees that the greater the number of regulatory compliance cases one can refer to, the more easily one can find alternatives for prescribed solutions by assuring equivalent safety levels. An anecdotal collection of recent heritage restoration and reuse cases, where issues related to protection, listing, and compliance requirements (in the areas of personal safety, fire safety, accessibility, energy efficiency, etc.) have been addressed and solved in ingenious ways, can become a useful instrument for architects involved in this field, allowing them to develop arguments and find solutions that local authorities can approve.

For these same reasons, we chose the supra-national level to discuss relevant legislation and regulations for architectural heritage interventions. Consequently, the objective of the final discussion was to gather arguments, stimuli, positions and best practices so as to then make them available to international protection associations like **docomomo** International.

The meeting contributions and the closing discussion made it clear that one of the key issues is the extraordinary proliferation of regulations from the second half of the 19th century onwards: this subverted the previous interrelation between so called “technical standards” and the Constitution. Architecture was originally governed by “standard practice”, but gradually this has given way to a proliferation of technical regulations that have



Figure 1. **Le Corbusier**,
Unité d'habitation, Marseille (1945–1952),
fire on February 9, 2012.

Figure 2. **Otto Rudolf Salvisberg**,
Institut für Geologie, Universität Bern,
Bern (1929–1931).

Figure 3. **Roland Korn, Hans Erich Bogatzky**,
Staatsratsgebäude, Berlin (1962–1964).

Figure 4. **Armin Meili**, *Gemeinschaftshaus*
der AGBrown, Boveri & Cie,
Baden (1951–1954).



colonised fundamental constitutional rights, like the preservation of cultural heritage. Hence, despite the principle of constitutional primacy, technical standards—which are basically derived from a practice-based induction approach—have gradually gained the upper hand and are now applied with a literal and paralysing attitude on the part of authorities or experts who are terrified by civil and criminal liability issues.

One way out of this impasse would be to require “constitutionality control or opinion”, whereby architects, with the support of a legal expert, could challenge a compliance request from a relevant authority, were it to be deemed contrary to the “rights of the monument”. Were such a proposal to take foot, it would restore the correct priorities of legal provisions, conferring primacy to constitutional principles and placing practice based regulations at a lower level.

The meeting also highlighted how present-day architects, whose practice is in the field of 20th century heritage, bear the full burden of having to

prove the quality features of the monument they are dealing with, often without having a specific institutional or regulatory framework. Over the coming years heritage interventions—recent heritage especially—are bound to acquire increasing weight when compared to new building. To avoid approaching this substantial stock of heritage as if it were always an exception to the rule, it would be in the interests of architects’ associations to create a legal framework or specific instruments—*ad hoc* regulations, committees of experts, specialised surveyors, etc.—to strengthen and assist this expanding sector.

In today’s financial and environmental situation, the protection of recent architecture has ethical as well as aesthetic implications. A new institutional framework could be applied to listed buildings first, and then to architectural work where value has been recognised by historiography, but not yet by institutions.

It is to be hoped that, on the basis of different national experiences and by developing ad hoc policies and legal instruments, it may become possible to guide interventions on existing buildings toward a

more realistic approach, without penalising the use and reuse of existing resources.

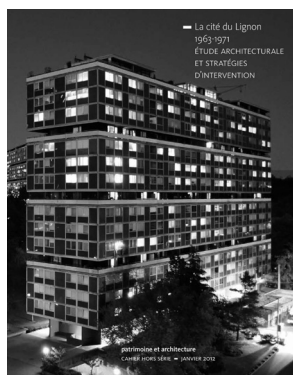
Jointly with all the participants in the meeting, the organisers hope that national and international bodies concerned with the protection of recent heritage will make use of the proposals that have issued from the study days and take them to a higher level of discussion. Were they to be conveyed to the relevant policy makers, they could become valuable material to support the development of more consistent national and international strategies which, at long last, would assure fitting consideration for the “rights of 20th century architectural heritage”.

Roberta Grignolo

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La Cité du Lignon 1963–1971, Étude Architecturale et Stratégies d'Intervention

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 (English and French Abstracts)
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Building large residential complexes that will grow in height and length, leaving the territory in green, and allow the housing of a large number of residents with low cost and suitable conditions of life, was a Modern vision that saw implementation mainly in the 1950's and 1960's. Le Corbusier's "la nature est inscrite dans le bail" was part of the programming principle of the new lifestyle. Over the years these Modern complexes have lost much of the glamour of the original intent, facing many problems, which included energy consuming construction, social conditions and poor maintenance. And while many of these were demolished in the late 20th century, their architectural and environmental values have been widely recognized in recent years, with the consequent need to protect some of them as an architectural and cultural heritage. The crucial question in this case was the way in which environmental conditions and architectural quality could be restored to ensure heritage, energy and economy all together.

The case of the Cité du Lignon at Geneva is a prime example. The Lignon was constructed between 1963 and 1971 to house 10,000 people with an ambitious architectural program, improving many technical features and a curtain wall in the residential units. The complex included a long zigzag asteroid bar and two towers with extensive gardens and communal facilities. The listing of the complex in 2009 was a real challenge that was successfully faced by the Laboratoire des Techniques de la Sauvegarde de l'Architecture Moderne of the

EPFL, proposing a pilot study based on exhaustive documentation, and a correspondingly exhaustive technical and energetic diagnosis. The proposals that were implemented managed to combine harmoniously the Modern architecture and green growth in a difficult building complex, giving the city environment and aesthetics. Therefore the important thing is not the restored building per se but the restoration process as a result of the methodology followed by the TSAM laboratory. It is this effort which is detailed in this book, together with historical and theoretical but mainly technical documentation, and has to be an effective tool for all those who are involved in the restoration of buildings of Modern architecture.

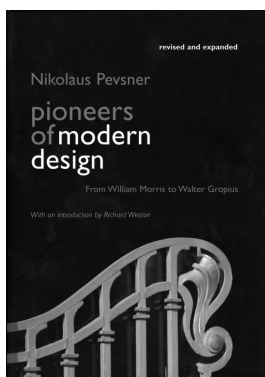
Panayotis Tournikiotis

Chair docomomo Greece

Chair ISC Technology

Pioneers of Modern Design

By Nikolaus Pevsner
 Publisher: Palazzo Editions, Bath
 ISBN: 978-0-9564-9426-9
 Language: English
 Year: 2011

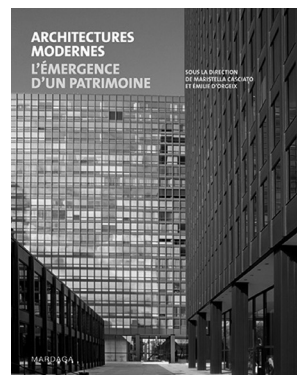


A new edition, fully illustrated in color, of one of the most widely read books on Modern design. Nikolaus Pevsner's landmark work was first published in 1936. Pevsner saw Modernism as a synthesis of three main sources: William Morris and his followers; the work of the 19th century engineers; and Art Nouveau. All these form the essential background to the work of the early Modernists, with their rejection of ornament, their use of new materials and their commitment to "utility" and the machine age. This new edition of this classic work is fully illustrated in color, with new feature spreads on the key protagonists and movements and a new introduction by Professor Richard Weston.

Palazzo Editions, Bath

Architectures Modernes. L'Émergence d'un Patrimoine

By Maristella Casciato and
 Émilie d'Orgeix
 Publisher: Mardaga, Wavre
 ISBN: 978-2-8047-0100-0
 Language: French
 Year: 2012



The headquarters of Docomomo International moved from Delft to Paris in 2002 with Maristella Casciato as Chair and Émilie d'Orgeix as Secretary General. Some years later, Anne-Laure Guillet joined the team as Director, leading altogether an intense and bright period of Docomomo and highlighting its missions. In 2010 the headquarters were relocated to Barcelona. This book aims, primarily, to reformulate a feedback on the evolution of speeches and dialectics that have profoundly changed the theories and practices regarding Modern heritage since the 1980s. It aims to be a retrospective focusing on the views and experiences of practitioners deeply involved in the recognition, enhancement and conservation of the architectural and urban heritage of the 20th century. The title *Modern Architectures, The Emergence of a Heritage*, wants to establish a causal link between the awareness of the multiplicity of Modernisms and, by extension, the ability to establish, in response to the current emergency, a selective and conscious process of "patrimonialization." The magnitude of these relations has profoundly influenced the *raison d'être* of Docomomo International during the ten years of the authors' mandate.

docomomo members focus on these aims related to the book's four chapters: Narrative and Memory; Place and Identity; Centre and Periphery; and Theory and Practice.

This publication is definitely a key tool to explain 10 years of Docomomo International's history.

Ivan Blasi

Secretary General docomomo International

Visions 10. Dret a un Habitatge Digne i Adequat

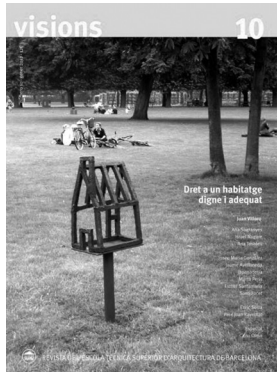
By Zaida Muxí

Publisher: ETSAB, Barcelona

ISBN: 978-8-4608-1261-6

Language: Catalan, Spanish

Year: 2012



Visions is the name of the magazine published by the Barcelona Architecture School. This number was dedicated to the right to a decent and adequate home. Ana Tostões, who had been invited to give a lecture on housing at the “Laboratory of Housing of the 20th century”, the Master directed by Zaida Muxí and Josep Maria Montaner, wrote an article entitled “Between Cancer and Capricorn: an Architecture Laboratory. Housing in Sub-Saharan Africa, case studies of Angola and Mozambique.” After studying the Modern Movement in Portugal, focusing on the postwar period of World War II and the analysis of the influence of Modern Brazilian architecture, she had an interest in research on Modern architecture and planning in the former Portuguese colonies in Africa. With the new field work information gathered from her last visit to both Angola and Mozambique, the text shows the influence of Modern architecture in these countries through specific case studies. These works are a small sample of potential output asserted by Modern architecture in Angola and Mozambique, evident in the iconic qualities, tectonic and programmatic legacy, unique in every way. Docomomo as an organization committed to the documentation and preservation of Modern architecture is committed to preserving this unique and expressive Modern tropical landscape, a point which is highlighted in the publication.

Ivan Blasi

Secretary General **docomomo** International

After the Project Updating Mass Housing Estates Actualització de polígons residencials II EcoRehab

By Adolf Sotoca (editor)

Publisher: Iniciativa Digital Politècnica

(UPC), Barcelona

ISBN: 978-8-4765-3919-4

Language: English, Catalan

Year: 2012



The need to rebuild our cities on themselves seems very questionable today. In this context, the massive housing projects that met the urban explosion of the second half of the 20th century are a vital presence that demands answers. Despite the considerable experience accumulated in intervention, approaches offering comprehensive and systematic deep in thought approaches or overall approaches allowing compared visions on the diversity of processes, problematic and answers, are not common.

As discussed in the introduction, these mass housing areas currently accumulate problems dealing with physical and typological housing obsolescence; social problems arising from the progressive aging of the population and the arrival of new immigration waves; and urban integration problems generated from geographical marginalization. The regeneration of these estates therefore requires assessing the physical conditions of built heritage in order to address livability issues; improving urbanity conditions in these areas with the provision of facilities, characterization of open spaces and the improvement of internal accessibility; and finally solving their territorial integration problems.

This collective publication, steered by Adolf Sotoca, and generated from different studies on case studies in Barcelona, aims at placing it in an international context. It does so by making a first-hand comparative view of mass housing formation processes in five cases rather distant from Barcelona: Seoul, Krakow, Belgrade and Bucharest. The generality of these processes is effectively highlighted

together with the peculiarities of each case and its problematic. Within this international perspective, the case of Barcelona is introduced through an interview by Francesc Peremiquel to Pere Serra on the experiences of renewal of housing estates of the last 30 years.

The three case studies, used as a touchstone, are estates located more than 40 years ago in one of Barcelona's rear parts which has now become its eastern façade, subject now to renovation projects and processes. Besides its strategic location, the selection of these case studies has clearly distinct legacies and situation points, and they allow working hypotheses to be set seeking for a more general reflection. The remodeling of the Bon Pastor neighborhood, a so-called cheap housing estate erected in 1929, has generated much controversy between social and urban memory preservation and the improvement of living conditions. It offers a line of work and a reflection which are settled on the tension between the need for major renovation and sensitivity to existing reality. The case of Ciutat Meridiana—a private estate built in 1964 in a hardly reasonable situation due to the climatic conditions, rough topography and difficult access, only understandable because of the low cost of the land—raises yet a considerable space for improvement, both internal and especially external due to its connection with the natural environment, the Parc Natural de Collserola, and its accessibility by means of public transport. To jointly address the neighborhoods of La Mina, the subject of one of the most elaborate and interesting recent projects, and the Sud-Oest del Besòs neighborhoods brings up the question of the delimitation of these interventions and their effects on the design responses.

Each of these case studies counts with the contributions of qualified specialists which enrich the approaches to each of these mass housing estates: José Luis Oyón on Bon Pastor, Olga Tarrasó on Ciutat Meridiana and Sebastià Jornet on La Mina neighborhood. The conclusion appears as an interview with Amador Ferrer—whose 1982 thesis was the first to examine systematically and to claim Barcelona's estates from the second half of the 20th century—assesses and proposes a new scenario for these mass housing estates.

This publication is a necessary and extremely useful contribution to address a critical issue, absolutely current and which has broad impact both on the national and international context.

Manuel Guardia

Universitat Politècnica de Catalunya

**Coup de Dés.
Mediterranean Cities.
Architectural and Urban Design.**

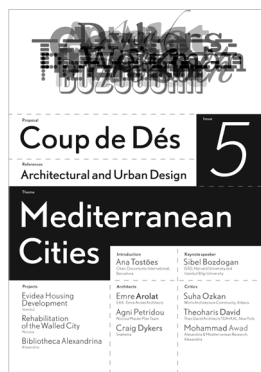
By AA.VV.

Publisher: Actar, Barcelona

ISBN: 978-8-4936-9014-4

Language: English

Year: 2012



Coup de Dés is the title of a series of seminars that have the intention to depart from a series of completed works and to open up a debate on their significance.

Regarding the concept behind this series, Ignasi de Sola-Morales established its defining principles before his premature death in 2001: "The reference to the text by Mallarmé serves as our departure point. There is nothing pre-established. Not even plurality, hybridization or multiplicity. Today's architectural project is a risk, calculated or not, faced with an unlimited number of possibilities. Acuteness, ingenuity, astuteness or chance are the reference points of a reality that appears un-disciplined, disordered, un-leashed. To pose the questions why does this happen, what is proposed and what is achieved is to attempt to understand the project: something artificially superimposed on reality to trap some kind of energy, a form, a trait. To design is to launch a configuration, a hypothesis, convinced that it will be able to process lines, fractures, folds that concentrate peculiar energies existing in reality. To cross these lines, elaborate the conflict, to fashion these knots has always been the purpose of the project."

The 2010 edition of the Coup de Dés was celebrated at the Mies van der Rohe Pavilion in Barcelona and Docomomo International was presented by the Chair, Ana Tostões, with the lecture "Continuity and Change." **docomomo**, as a worldwide network of people motivated by belief in the value of Modern Movement architecture, gathers a cluster of professionals, such as practicing architects, town planners, researchers, historians and theore-

ticians who share strong convictions regarding the importance and innovation of Modern architectural design. This affinity with Modernity relies on the persuasion that Modernity is a worldwide heritage, a sustainable design tool, a project thinking method and finally, a key for the future of architectural production and cultural debate. The proposal for the new headquarters to be in Barcelona at the Mies van der Rohe Foundation is based on the belief that the challenge of forthcoming decades must be faced with a twofold strategy:

1. To conduct highly skilled, sustainable, exemplary interventions in buildings, neighborhoods and landscapes of the Modern Movement.

2. To widen the territorial scope by investigating new cultural and geographical territories where modern architecture has played a significant role.

Ivan Blasi

Secretary General **docomomo** International

**Lo Spazio interno moderno
come oggetto di salvaguardia
Modern Interior Space as an
Object of Preservation**

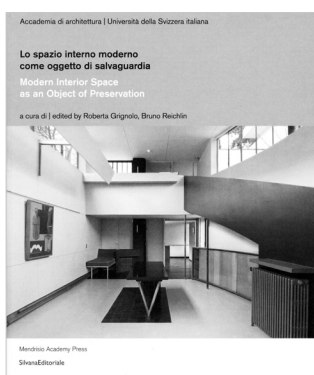
By Roberta Grignolo and
Bruno Reichlin

Publisher: Mendrisio Academy Press/
Silvana Editoriale, Milano

ISBN: 978-8-8366-2417-1

Language: Italian/English

Year: 2012



In 20th century heritage preservation projects, Modern interior space often receives secondary consideration. This is one of the main reasons for which it has been chosen as the main topic of this volume which gathers the re-shaped and revised contributions from the international study days held at the Academy of Architecture in Mendrisio. These meetings, held under the title "Modern Interior Space as an Object of Preservation" were organized as part

of an interfaculty research project named "Critical Encyclopaedia for the Restoration and Reuse of 20th Century Architecture". In 2008 the project received funding from the Swiss university conference to promote cooperation between the main Swiss schools of architecture (Swiss Cooperation Project in Architecture). The research project comprises four sections: the first, "Historical-Critical Tools and Preservation" is coordinated by Roberta Grignolo and Bruno Reichlin (USI), the second, "Material History of Buildings" is led by Franz Graf (EPFL and USI), the third, "Preservation of the City in the 20th Century" is coordinated by Vittorio Magnago Lampugnani (ETHZ) and the fourth, "Methodological Tools" is led by Giacinta Jean (SUPSI).

Mendrisio Academy Press/Silvana Editoriale

**Architecture industrialisée et
préfabriquée: connaissance et
sauvegarde**

**Understanding and Conserving
Industrialised and
Prefabricated Architecture**

By Franz Graf and Yvan Delemontey

Publisher: Presses polytechniques et
universitaires romandes

ISBN: 978-2-8807-4960-6

Language: French and English

Year: 2012



A neglected area until quite recently, the industrialization of construction during the 20th century has become a hot topic among architectural historians in recent years. This two-day international conference, organized in connection with the project entitled "A Critical Encyclopedia for the Restoration and Re-use of 20th Century Architecture", engages with renewed interest in this area of study. But unlike other meetings, this conference is not only concerned with retracing the historical de-

velopment but also with taking stock—by means of case studies—of the conservation problems posed by industrialized and prefabricated architecture today. Just as the way we construct history is inseparable from the thoughts and challenges we face in our present society, the way we treat our heritage is nourished by turning our thoughts back to the history that produced it. This two-way movement is something we wish to examine during our conference by exploring the linkages between recent built heritage and contemporary architectural activity. This international conference is therefore structured around four themes. Day One, which opens with an historical panorama of the industrialization of building during the last century, dwells on one of its essential aspects: architecture imagined as technical object.

Focusing specifically on the post-war period, Day Two will show how the industrialization of building generally and prefabrication in particular led to the advent of mass housing and helped to disseminate it worldwide. The meeting will end with a look at recent or ongoing conservation projects that, while also tackling specific concerns, demonstrate how interventions in existing buildings might be said to constitute a special moment for the architect to begin redrawing the parameters of the discipline.

Presses polytechniques et universitaires romandes

Superfici di vetro negli anni Trenta

By Albani Francesca
 Publisher: Maggiore Editore,
 Santarcangelo di Romagna
 ISBN: 978-8387-6090-7
 Language: Italian
 Year: 2012



The book proposes a series of reflections about a particularly exciting time in the history of glass: the interwar period. The idea of a solid through

which one can see, that cannot hide anything, of a material which is "brother of light, air and space," stimulated the minds and enriched the debate. In this period, characterized by the intertwining of continuous technical innovation and formal experimentation, this material takes on the symbolic value of "Modernity". Today, few traces remain of these artifacts which are grouped under the name "glass" and that have completely different characteristics from the contemporary ones. One of the fundamental problems related to their conservation is the fact that it is hard to perceive them as material evidence. The reasons are many but the main ones are related to transparency, which creates the illusion of an apparent "non-material" and the fragility that suggests impermanence. By focusing on the specific characteristics of these glasses, their production processes which have now disappeared, and in relation to their spread and their use, the book highlights a complexity in terms of material culture of great interest not only in the field of architecture, but also for the cultural, political and economic fields. Through a rereading of some restoration of the most significant architecture of the period after the wars, it is stressed that specific knowledge of the "materiality" of architecture can lead to a design approach that can combine—in whole or in part—conservation instances with the main problematic related to the reuse of interior spaces. Francesca Albani is a researcher in Architectural Restoration at the Politecnico di Milano. Since 2003, she has addressed issues related to conservation and reuse of the 20th century developed in her doctoral thesis (2006, Politecnico di Milano in collaboration with the University of Geneva), the doctoral dissertation (2007, Politecnico di Milano), then pursued through national (MIUR-PRIN) and international (University of Italian Switzerland, Mendrisio Academy of Architecture) research grants and research collaborations. Since 2008 she has been concentrating on the task of teaching the fundamentals of design for historic buildings.

Maggiore Editore, Santarcangelo di Romagna

La arquitectura desde el interior, 1925-1937

Lilly Reich y Charlotte Perriand

By María Melgarejo Belenguer
 Publisher: Fundación Caja de Arquitectos – Arquia/Tesis
 ISBN: 978-8-4939-4091-1
 Language: Spanish
 Year: 2011



The publishing activity of the Fundación Caja de Arquitectos began in 1997 and focuses on three collections: *arquía/thesis*, *arquía/themes* and *arquía/la cimbra* (formwork) aimed at the publication of research, analysis and theory in architecture. The director of this collection is Professor Carlos Martí and this book by María Melgarejo Belenguer (Architecture from within, 1925-1937. Lilly Reich and Charlotte Perriand) counts with a preface by architect Luis M. Mansilla.

In the treaties of the History of Architecture, the main works are always photographed from the outside, and what happens inside is poorly treated or is relegated to a secondary role which shows the design of furniture. This study draws attention to the interior of architecture in order to fill that gap. It delves into the relationship established between the interior and the exterior in the architecture of 1925-1937, a period with radical and absolute changes which had no precedents: the emergence of a new concept of space as generator of architecture. From 1927 onwards, to give the new life a new form and a new space became the central element of the work of Mies van der Rohe and Le Corbusier. That same year Mies began his collaboration with Lilly Reich and Le Corbusier with Charlotte Perriand. This surprising fact was taken as the guiding principle of this thesis on the real transformation that began in the interior of architecture, from the conviction that, as Le Corbusier said, "the outside is the result of the interior."

Fundación Caja de Arquitectos – Arquia/Tesis